Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 21,06,96 : TSO 4113

Combination No. : 0 402 746 616

Injection pump

Pump designation : PES6P130A720LS7422

EP type number : 0 412 736 809

Governor

Governer design. : RQV300...900PA946-1

Governer no. : 0 421 813 992

Cust. part No. :

Customer-spec, information

Customer : IVECO-AIFO : 8217 SRI Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C 40 : +- 2.0 Tolerance °C

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5

Overflow quantity

: 200 min. L/h min. l/h : 200 Tolerance l/h : +- 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 075

x inside diameter : 3.0

Outside diameter : 8.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

26.0 Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 5.05 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 12.00 Tolerance mm : +- 0.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

tolerance °NW : +- 0.50

Start of delivery mark

: +- 0.40 tolerance °NW

: 1 Barrel no.

BASIC SETTING

900 Rated speed rpm :

Rack travel in mm: 12.05 Tolerance mm : +- 0.05

A01

Del. quantity cm3/1000 strokes : 245.0	Rated speed rpm : 1220 guide sleeve travel mm : 11.50
Tolerance cm3/1000 strokes : +- 1.5	Tolerance mm : +- 0.50
Check tolerance cm3/1000S. : +- 5.0	GUIDE SLEEVE POSITION
Spreed	+ Rated speed rpm : 1070
Tolerance cm3/1000 strokes : 6.0	+ Rack travel in mm : 11.05 + Tolerance mm : + 2.70 +
Check tolerance cm3/1000S. : 10.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 300	Rated speed rpm : 900 Aneroid pressure hPa : 1200
Rack travel in mm: 4.60	→ Del. quantity
Tolerance mm : +- 0.10 Del. quantity	+ Tolerance
cm3/1000 strokes : 22.0 Tolerance	+ cm3/1000 strokes : +- 1.5 + Check tolerance
cm3/1000 strokes : +- 3.0 Check tolerance	- cm3/1000s. : +- 5.0 - Spreed
cm3/1000s. : +- 7.0	+ Tolerance
Spreed Tolerance	+ cm3/1000 strokes : 6.0 + Check tolerance
cm3/1000 strokes : 10.0 Check tolerance	cm3/1000s. : 10.0
cm3/1000S. : 14.0	+
	CONTROL LEVER
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ + control lever
	<pre>position degree : 120.0 tolerance degree : +- 4.0</pre>
GUIDE SLEEVE TRAVEL	+
Rated speed rpm : 300	+ RATED SPEED
Nated Speed I pill . See	
guide sleeve	rack travel mm : 11.00
	rack travel mm : 11.00 Rated speed rpm : 945 Tolerance 1/min : +- 5
guide sleeve travel mm : 1.17 Tolerance mm : + 0.20 Rated speed rpm : 959	Rated speed rpm : 945 Tolerance 1/min : +- 5 rack travel mm : 4.00
guide sleeve travel mm : 1.17 Tolerance mm : + 0.20 Rated speed rpm : 959 guide sleeve	Rated speed rpm : 945 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1035
guide sleeve travel mm : 1.17 Tolerance mm : + 0.20 Rated speed rpm : 959	Rated speed rpm : 945 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1035 Tolerance 1/min : +- 15
guide sleeve travel mm : 1.17 Tolerance mm : + 0.20 Rated speed rpm : 959 guide sleeve travel mm : 7.98 Tolerance mm : + 0.15 Rated speed rpm : 766	Rated speed rpm : 945 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1035 Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : +- 0.50
guide sleeve travel mm : 1.17 Tolerance mm : + 0.20 Rated speed rpm : 959 guide sleeve travel mm : 7.98 Tolerance mm : + 0.15 Rated speed rpm : 766 guide sleeve	Rated speed rpm : 945 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1035 Tolerance 1/min : +- 15 rack travel mm : 0.50
guide sleeve travel mm : 1.17 Tolerance mm : + 0.20 Rated speed rpm : 959 guide sleeve travel mm : 7.98 Tolerance mm : + 0.15 Rated speed rpm : 766	Rated speed rpm : 945 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1035 Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : +- 0.50
guide sleeve travel mm : 1.17 Tolerance mm : + 0.20 Rated speed rpm : 959 guide sleeve travel mm : 7.98 Tolerance mm : + 0.15 Rated speed rpm : 766 guide sleeve travel mm : 5.97 Tolerance mm : + 0.25 Rated speed rpm : 540 guide sleeve	Rated speed rpm : 945 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1035 Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : +- 0.50
guide sleeve travel mm : 1.17 Tolerance mm : + 0.20 Rated speed rpm : 959 guide sleeve travel mm : 7.98 Tolerance mm : + 0.15 Rated speed rpm : 766 guide sleeve travel mm : 5.97 Tolerance mm : + 0.25 Rated speed rpm : 540	Rated speed rpm : 945 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1035 Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1200

tolerance degree	: +- 4.0	+ Aneroid pressure + hPa : 1200
Testing:		Rated speed rpm : 550 Del. quantity
Rated speed rpm	: 300	+ cm3/1000 strokes : 256.0
rack travel mm	: 4.60	† Tolerance
Tolerance mm	: +- 0.10	cm3/1000 strokes : +- 3.5 Check tolerance
Rated speed rpm	: 200	cm3/1000s. : +- 7.0
CRT mm min.	: > 6.10	Aneroid pressure
Rated speed rpm	: 365	Rated speed rpm : 550
		+ Del. quantity - + cm3/1000 strokes : 172.5
TORQUE CONTROL		Tolerance cm3/1000 strokes : +- 1.5
Rated speed rpm	• 000	Check tolerance
rack travel mm	: 12.05	+ cm3/1000s. : +- 5.0
Tolerance mm	: +- 0.05	+
Rated speed rpm rack travel mm Tolerance mm	: 550	+ BREAKAWAY
rack travel mm	: 12.10	†
Tolerance mm	: +- 0.10	t Back travel in ma . 11 00
		+ Rack travel in mm : 11.00 - + Rated speed rpm : 945
ANEROID/ALTITUDE		+ Tolerance 1/min : +- 5
COMPENSATOR TEST		+
		+
SETTING		STARTING FUEL DELIVERY
Rated speed rpm	: 550	+ + Rated speed rpm : 100
Pressure hPa		Del. quantity
rack travel mm	: 12.05	- cm3/1000 strokes : 155.0
Tolerance mm	: +- 0.05	† Tolerance
		+ cm3/1000 strokes : +- 15.0
MEASUREMENT		+ Check tolerance + cm3/1000s. : +- 19.0
Pressure hPa	<u>. – </u>	1 (1137 10003 +- 17.0
Rated speed rpm		+
rack travel mm		+
Tolerance mm	: +- 0.10	+
Rated speed rpm	: 550	+ LOW IDLE
		Rated speed rpm : 300
Pressure hPa	: 420	+ Del. quantity
rack travel mm	: 10.30	+ cm3/1000 strokes : 22.0
Tolerance mm	: +- 0.15	+ Tolerance + cm3/1000 strokes : +- 3.0
Pressure hPa	: 450	Check tolerance
rack travel mm	: 10.85	+ cm3/1000s. : +- 7.0
Tolerance mm	: +- 0.05	+ Spreed
		+ Tolerance
		cm3/1000 strokes : 10.0 Check tolerance
		- + cm3/1000s. : 14.0
FUEL DELIVERY CHA	ARACTERISTICS	+

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25,06,96 : ISO 4113 Test oil

Combination No. : 0 402 746 640

Injection pump

Pump designation : PES6P120A320RS7359 : 0 412 726 925 EP type number

Governor

Governer design. : RQV300...1050PA1191

Governer no. : 0 421 814 114

Cust. part No. : CCEP 5147B 66-223

Customer-spec. information

: RENAULT V.I. Customer : MIDR 06.20.45 C4 Motor

: 188.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

40 temp. °C Tolerance °C 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar : +- 1.5 Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

26.0 Test pressure bar : Tolerance bar : + 1.0

4.70 Prestroke mm : +- 0.50Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.25 Tolerance mm : +- 0.75

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30 Check

: +- 0.50 tolerance °NW

Start of delivery mark

 $^{\circ}$ NW after s.o.d. : -0.45

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Barrel no. 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 12.60

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 193.0

A05

	+ guide sleeve
Tolerance cm3/1000 strokes : +- 1.0	travel mm : 3.28 Tolerance mm : + 0.25
Check tolerance cm3/1000s. : +- 4.0	Rated speed rpm : 460 guide sleeve travel mm : 3.86
Spreed Tolerance	Tolerance mm : +- 0.25
cm3/1000 strokes : 5.0	Rated speed rpm : 1460 guide sleeve
Check tolerance cm3/1000s. : 9.0	travel mm : 11.50 Tolerance mm : + 0.50
Rated speed rpm : 300	GUIDE SLEEVE POSITION
Rack travel in mm : -6.20 Tolerance mm : +- 0.10	Rated speed rpm : 1230
Del. quantity cm3/1000 strokes : 33.0	+ Rack travel in mm : 11.70 + Tolerance mm : +- 2.00
Tolerance cm3/1000 strokes : +- 2.0 Check tolerance	+ FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : +- 5.0 Spreed	Rated speed rpm : 700
Tolerance cm3/1000 strokes : 8.0	+ Aneroid pressure + hPa : 1000
Check tolerance cm3/1000s. : 12.0	+ Del. quantity + cm3/1000 strokes : 193.0 + Tolerance
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	- cm3/1000 strokes : + 1.0 - Check tolerance - cm3/1000s. : + 4.0
GUIDE SLEEVE TRAVEL	+ Spreed + Tolerance + cm3/1000 strokes : 5.0
	Check tolerance
Rated speed rpm : 300 guide sleeve travel mm : 1.33	+ cm3/1000s. : 9.0
travel mm : 1.33 Tolerance mm : +- 0.25	CONTROL LEVER
Rated speed rpm : 1140 guide sleeve	- control lever
travel mm : 8.49 Tolerance mm : +- 0.25	position degree : 305.0tolerance degree : + 4.0
Rated speed rpm : 754 guide sleeve	RATED SPEED
travel mm : 6.10 Tolerance mm : +- 0.25	+ rack travel mm : -1.00 + Rated speed rpm : 1155 + Tolerance 1/min : +- 5
Rated speed rpm : 365 guide sleeve	+ rack travel mm : -8.60
travel mm : 2.40 Tolerance mm : + 0.25	Rated speed rpm : 1310 Tolerance 1/min : + 15
Rated speed rpm : 415	+ rack travel mm : -12.10 + Tolerance mm : +- 0.50

Rated speed rpm	: 1400	+ Rated speed rpm :> 100 + Rated speed rpm :< 220
		- +
LOW IDLE		+ Check
		+ speed 1/min :> 80 + Check
control lever position degree tolerance degree		speed 1/min : < 240
Testing:		+ FUEL DELIVERY CHARACTERISTICS +
	700	+ Aneroid pressure
Rated speed rpm	: 300	+ hPa : 1000 + Rated speed rpm : 1050
rack travel mm Tolerance mm	0.20	+ Rated speed rpm : 1030 + Del. quantity
rocerarice inti	. += 0.10	- cm3/1000 strokes : 196.0
Rated speed rpm	: 200	Tolerance
Mateu specu i pili	. 200	+ cm3/1000 strokes : +- 3.0
CRT mm max.	: < -3.80	+ Check tolerance
		+ cm3/1000s. : + 6.0
Rated speed rpm	: 370	+
		+ Aneroid pressure
		- + hPa :
TORQUE CONTROL		Rated speed rpm : 500
~	700	+ Del. quantity
Rated speed rpm	: 700	+ cm3/1000 strokes : 151.0
Detail speed nom	. 1050	+ Tolerance + cm3/1000 strokes : +- 1.0
Rated speed rpm Tolerance mm	· +- 0.10	+ Check tolerance
rocer arree min		+ cm3/1000s. : +- 4.0
		- +
ANEROID/ALTITUDE COMPENSATOR TEST		BREAKAWAY
		†
SETTING		+ Rack travel in mm : -1.00
Data dama ad man	. 500	+ Rated speed rpm : 1155 + Tolerance 1/min : +- 5
Rated speed rpm Pressure hPa		Toterance Minn : +- 3
MEASUREMENT		<u> </u>
		+ STARTING FUEL DELIVERY
Pressure hPa	: -	+
Rated speed rpm		+ Rated speed rpm : 100
rack travel mm		+ Tolerance mm : +- 0.75
Tolerance mm	: +- 0.20	+ Del. quantity + cm3/1000 strokes : 155.0
Debud opped non	: 500	+ Tolerance
Rated speed rpm	: 500	cm3/1000 strokes : +- 15.0
Pressure hPa	: 140	- Check tolerance
rack travel mm	-0.75	+ cm3/1000s. : +- 19.0
Tolerance mm	: +- 0.15	+
		+
Pressure hPa	: 200	+
rack travel mm	: -0.35	+ 1011 701 5
Tolerance mm	: 0.05	+ LOW IDLE
		Dated around mar : 700
START CUT-OUT		Rated speed rpm : 300

Del. quantity		
cm3/1000 strokes	:	33.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +-	5.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 24.06.96 : ISO 4113 Test oil

Combination No. : 0 402 946 013

Injection pump

Pump designation : PES6P120A320RS8028

EP type number : 0 412 926 021

Governor

Governer design. : RQV275...1250PA1189K

Governer no. : 0 421 815 974

Cust. part No. : CCEP 5146A 66-220

Customer-spec. information

Customer : RENAULT V.I. : MIDR 06.02.26Y41 Motor

: 184.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

40 temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.00 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 11.00 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.50

Start of delivery mark

 $^{\circ}$ NW after s.o.d. : -0.25

: +- 0.50 Tolerance Check

tolerance °NW : +- 0.75

: 1 Barrel no.

Beginning of delivery differende

betw. rack trav.

21.00 mm

and maximum rack

11.00 travel

Difference ° CS : 2.25

BASIC SETTING

Rated speed rpm : 1250	+ Tolerance mm : +- 0.25
	+ Rated speed rpm : 412
Rack travel in mm : 14.40	<pre>+ guide sleeve + travel mm : 2.53</pre>
Tolerance mm : + 0.05	+ Tolerance mm : +- 0.25
TOTEL GITTE THEIR	+
Del. quantity	Rated speed rpm : 462
cm3/1000 strokes : 277.0	+ guide sleeve
Tolerance	+ travel mm : 3.16 + Tolerance mm : +- 0.25
cm3/1000 strokes : +- 1.0	T Total acce that . The U.23
11137 1000 0 t 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1	Rated speed rpm : 550
Check tolerance	guide sleeve
cm3/1000s. : +- 4.0	travel mm : 3.97
Spreed	Tolerance mm : +- 0.25
Tolerance	Rated speed rpm : 1630
cm3/1000 strokes : 5.0	+ guide sleeve
	+ travel mm : 13.50
Check tolerance	+ Tolerance mm : +- 0.50
cm3/1000s. : 9.0	I
Rated speed rpm : 275	↓ GUIDE SLEEVE POSITION
	+
	+ Rated speed rpm : 1420
Rack travel in mm: -7.70	Took trought in my 17 50
Tolerance mm : +- 0.10 Del. quantity	+ Rack travel in mm : 13.50 + Tolerance mm : +- 1.50
cm3/1000 strokes : 42.0	+
Tolerance	<u> </u>
cm3/1000 strokes : +- 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : +- 2.0 Check tolerance	}
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000S. : +- 6.0	Rated speed rpm : 1250
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000S. : +- 6.0 Spreed	}
<pre>cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000S. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0</pre>	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity
<pre>cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000S. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance</pre>	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 277.0
<pre>cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000S. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0</pre>	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 277.0 Tolerance
<pre>cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000S. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance</pre>	Rated speed rpm : 1250 Aneroid pressure HPa : 1600 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0
<pre>cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000S. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance</pre>	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 277.0 Tolerance
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000S. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.10	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.10 Tolerance mm : +- 0.25	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.10 Tolerance mm : +- 0.25 Rated speed rpm : 1332 guide sleeve	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 299.0
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.10 Tolerance mm : +- 0.25 Rated speed rpm : 1332 guide sleeve travel mm : 10.07	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER control lever
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.10 Tolerance mm : +- 0.25 Rated speed rpm : 1332 guide sleeve	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 299.0 tolerance degree : + 4.0
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.10 Tolerance mm : +- 0.25 Rated speed rpm : 1332 guide sleeve travel mm : 10.07 Tolerance mm : +- 0.25	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 299.0
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.10 Tolerance mm : +- 0.25 Rated speed rpm : 1332 guide sleeve travel mm : 10.07 Tolerance mm : +- 0.25 Rated speed rpm : 912	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 299.0 tolerance degree : + 4.0 RATED SPEED
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 275 guide sleeve travel mm : 1.10 Tolerance mm : +- 0.25 Rated speed rpm : 1332 guide sleeve travel mm : 10.07 Tolerance mm : +- 0.25	Rated speed rpm : 1250 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 299.0 tolerance degree : + 4.0

Tolerance 1/min	: +- 15	† Tole	erance mm	: +- 0.20
rack travel mm Rated speed rpm	: -10.40 : 1490	Rate	ed speed rpm	: 1250
Tolerance 1/min	: +- 5	1 Pres	ssure hPa	: 240
rocerance mini	. +-		k travel mm	: -3.60
	. 47.00	1		
rack travel mm		† 1016	erance mm	: +- 0.20
Tolerance mm		+		
Rated speed rpm	: 1600		ssure hPa	: 480
		+ rack	k travel mm	: -1.60
		+ Tol€	erance mm	: +- 0.05
		 +		
LOW IDLE		 		
		↓ STAF	RT CUT-OUT	
		1		
control lever		↓ Pate	ed speed rpm	: > 175
position degree	: 254.0		ed speed rpm	< 240
		T	sa speed i bill	. \ 240
tolerance degree	; + 4.0	†	1	
		+ Chec		455
Testing:			ed 1/min	: > 155
		+ Chec		
Rated speed rpm	: 275	+ spee	ed 1/min	: < 260
rack travel mm	: -7.70	+		
Tolerance mm	: +- 0.10	<u> </u>		
		+ FUEL	_ DELIVERY CHA	RACTERISTICS
Rated speed rpm	: 200	1		
		∔ Aner	roid pressure	
CRT mm max.	: < -6.90	+ hPa		: 1600
CICI IIII III III III III III III III I	0.76		ed speed rpm	•
Rated speed rpm	• 380		quantity	. 000
Rated speed (pill	. 500	7 DEC.	1000 strokes	• 288 U
		· ·		. 200.0
			rance	. 70
TORQUE CONTROL			1000 strokes	: +- 3.0
			k tolerance	
Rated speed rpm	: 1250	+ cm3/	1000s.	: +- 6.0
		+		
Rated speed rpm			roid pressure	
rack travel mm	: -0.85	+ hPa		: -
Tolerance mm	: +- 0.10	→ Rate	ed speed rpm	: 1000
		→ Del.	quantity	
Rated speed rpm	: 350		1000 strokes	: 179.0
rack travel mm		t c	erance	
Tolerance mm	: +- 0.25		1000 strokes	: + 1.0
rocci di loc ilan		· ·	k tolerance	
			10005.	: +- 4.0
ANEROID/ALTITUDE		1	10000.	
COMPENSATOR TEST		1		
COMPENSATOR TEST		⊥ BDEA	\KAWAY	
			NOTAL I	
CETTIA!C		I		
SETTING		T	travel in mm	_1 00
	4250			
Rated speed rpm	: 1250		ed speed rpm	
Pressure hPa	: 1600	+ lore	erance 1/min	: +- 15
Tolerance mm	: +- 0.10	†		
		†		
MEASUREMENT		+		
		+ STAR	RTING FUEL DEL	IVERY
Pressure hPa	: -	+		
Rased speed rpm	: 1000	+ Rate	ed speed rpm	: 100
rack travel mm	: -4.40	+		
· were a series of the series		•		

Del. quantity cm3/1000 strokes	:	105.0
Tolerance cm3/1000 strokes	: +-	- 15.0
Check tolerance cm3/1000s.	: +-	- 19.0

LOW IDLE

Rated speed rpm	:	275
Del. quantity		
cm3/1000 strokes	:	42.0
Tolerance		
cm3/1000 strokes	: +-	2.0
Check tolerance		
cm3/1000s.	: +-	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 24.06.96 Edition : ISO 4113 Test oil

Combination No. : 0 403 244 047A

Injection pump

Pump designation : PES4MW100/720RS1525

EP type number : 0 413 204 022

Governor

Governer design. : RQV300...1300MW132

: -13

: 0 420 083 330 Governer no.

Cust. part No. : 0260746302

Customer-spec. information Customer : MB-NFZ : 0M364LA Motor Power KW : 103.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

40 temp. °C Tolerance °C : +- 2.0

: 1 419 992 198 Overflow valve

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar : +- 1.5 Tolerance bar

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +- 1.0

Prestroke mm 4,55 : **←** 0.05 Tolerance mm Check

: +- 0.10 tolerance mm

Rack travel in mm : 20.00 : **←** 1.00 Tolerance mm

: 1-3-4-2 Firing order

Phasing : 0-90-180-270

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 13.95 : +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 119.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s.

: +- 4.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance cm3/1000s.	: 8.0	+ Rated speed rpm : 1615
CIII 10003.	. 0.0	Rack travel in mm : 12.90
Data data da anno	. 700	· · · · · · · · · · · · · · · · · · ·
Rated speed rpm	: 300	† Tolerance mm : +- 1.30
		†
	7.40	
Rack travel in mo		+ FULL LOAD DELIVERY AT FULL LOA
Tolerance mm	: +- 0.10	+
Del. quantity		+ Rated speed rpm : 1300
cm3/1000 strokes	: 12.0	+ Aneroid pressure
Tolerance		+ hPa : 1200
cm3/1000 strokes	: +- 2.0	→ Del. quantity
Check tolerance		+ cm3/1000 strokes : 119.0
cm3/1000s.	: +- 4.5	+ Tolerance
	• • •• •	cm3/1000 strokes : +- 1.0
Spreed		Check tolerance
Tolerance	. 20	cm3/1000s. : +- 4.0
cm3/1000 strokes	: 2.0	• · · · · · · · · · · · · · · · · · · ·
Check tolerance		+ Spreed
cm3/1000s.	: 4.0	+ Tolerance
		+ cm3/1000 strokes : 5.0
		+ Check tolerance
(B) SETTING OF IN	NJECTION PUMP	+ cm3/1000s. : 8.0
WITH GOVERNOR		+
		+
		<u> </u>
GUIDE SLEEVE TRAV	/EL	→ CONTROL LEVER
		1
Rated speed rpm	: 300	→ control lever
guide sleeve	. •••	position degree : 113.0
travel mm	: 0.91	tolerance degree : +- 4.0
Tolerance mm	: +- 0.20	1 cocci and degree
rocerance in	. +- 0.20	RATED SPEED
5 4 - 4 4	. 475/	T KATED SPEED
Rated speed rpm	: 1354	12.00
guide sleeve	7.45	+ rack travel mm : 12.90
travel mm	: 7.15	+ Rated speed rpm : 1345
Tolerance mm	: +- 0.15	+ Tolerance 1/min : +- 5
		†
Rated speed rpm	: 1130	+ rack travel mm : 4.00
guide sleeve		+ Rated speed rpm : 1480
travel mm	: 5.40	+ Tolerance 1/min : +- 15
Tolerance mm	: +- 0.25	+
		+ rack travel mm : 0.50
Rated speed rpm	: 800	+ rack travel mm : 0.50 + Tolerance mm : + 0.50
guide sleeve	-	+ Tolerance mm : + 0.50 + Rated speed rpm : 1550
travel mm	: 3.79	
Tolerance mm	: +- 0.25	1
roter arte and		
Rated speed rpm	: 1679	+ LOW IDLE
	: 1079	T LOW TOLE
guide sleeve	: 12.00	T
travel mm	· ·	T
Tolerance mm	: +- 0.25	+ control lever
		+ position degree : 74.0
Rated speed rpm	: 1780	tolerance degree : +- 4.0
guide sleeve		†
travel mm	: 13.50	† Testing:
Tolerance mm	: +- 0.50	+
		+ Rated speed rpm : 300
		rack travel mm : 3.40
GUIDE SLEEVE POSI	TION	rack travel mm : 3.40 Tolerance mm : +- 0.10
	· · ·	4
		•

LOAD STOP

Rated speed rpm	: 200	+ Del. quantity
ADT	. > / 20	+ cm3/1000 strokes : 117.0
CRT mm min.	: > 4.20	+ Tolerance + cm3/1000 strokes : +- 2.0
		Check tolerance
TORQUE CONTROL		cm3/1000s. : +- 5.0
IONAGE CONTROL		+ Spreed
Rated speed rpm	1300	Tolerance
rack travel mm	• 13.95	cm3/1000 strokes : 6.0
Tolerance mm	: +- 0.05	+ Check tolerance
		+ cm3/1000s. : 9.0
Rated speed rpm rack travel mm Tolerance mm	: 600	+
rack travel mm	: 13.95	Aneroid pressure
Tolerance mm	: +- 0.10	+ hPa : -
		+ Rated speed rpm : 500
ANEROID/ALTITUDE		+ cm3/1000 strokes : 50.0
COMPENSATOR TEST		+ Tolerance
		+ cm3/1000 strokes : +- 1.0
		+ Check tolerance
SETTING		+ cm3/1000s. : $+$ 3.0
- : .	500	†
Rated speed rpm	: 500	PINEALIAN
Pressure hPa	: 1200	+ BREAKAWAY
rack travel mm	: 13.95	†
Tolerance mm	: +- 0.05	Pook thought in mm. 12.00
MEACHDEMENT		+ Rack travel in mm : 12.90
MEASUREMENT		Rated speed rpm : 1345 Tolerance 1/min : +- 5
Pressure hPa		Toterance min . +- 3
Rated speed rpm	500	I
Tolerance mm		
TOTEL BLICE WILL	0.10	
Rated speed rpm	: 500	
TO TO THE TOTAL TOTAL TO THE TO		Rated speed rpm : 100
Pressure hPa	: 750	+ Del. quantity
rack travel mm		+ cm3/1000 strokes : 150.0
Tolerance mm		∔ Tolerance
		+ cm3/1000 strokes : +- 5.0
Pressure hPa	: 350	+ Check tolerance
rack travel mm	: 1.15	+ cm3/1000s. : +- 8.0
Tolerance mm	: +- 0.10	†
		+
OTA D. T. O. T.		+
START CUT-OUT		LOW IDLE
Dotod amond au-	: > 100	I LOW TOLE
Rated speed rpm		Rated speed rpm : 300
Rated speed rpm	. \ 200	Del. quantity
Check		- cm3/1000 strokes : 12.0
speed 1/min	: > 80	Tolerance
Check	. / 00	cm3/1000 strokes : +- 2.0
speed 1/min	: < 220	Check tolerance
specu mmm		- cm3/1000s. : +- 4.5
	·	Spreed
FUEL DELIVERY CHA	ARACTERISTICS	Tolerance
. Jud Judatum VIII		+ cm3/1000 strokes : 2.0
Aneroid pressure		Check tolerance
hPa	: 1200	+ cm3/1000s. : 4.0
Rated speed rpm	: 600	+
The same of the same of the same	- -	•

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 01.07.96 Edition : ISO 4113 Test oil Combination No. : 9 400 085 310 Injection pump Pump designation : PES6A95D410RS2772 EP type number : 9 400 084 018 Governor Governer design. : RQV300...1300AB1066 : -8L : 9 420 080 279 Governer no. Cust. part No. Customer-spec. information Customer : MBB : OM 366 LA Motor Power KW : 155.0

TEST	BENCH	REQUIREMENTS

Inlet	line	:	;	3.2

Test oil inlet		
temp. °C	:	40
Tolerance °C	: +-	2.0

Overflow valve : 1 419 992	198
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Inlet	press.	bar	:	1.5
TILLE	PI C33.	Dui	•	

Test	nozzle	holde

assembly :	0	681	343	009
------------	---	-----	-----	-----

Opening pr	essure			
bar		:		173.5
Tolerance	bar	:	+-	1.5

Test	lines	:	1	680	750	015

Outside diameter	:	6.0
------------------	---	-----

	inside diameter length mm	:	3. 600	0
RE	EMARKS			
Se	A) INJECTION PUMP et equal delivery er values		—	VALUES

BEGINNING OF DELIV	/ERY		
Test pressure bar Tolerance bar	: : +-	26.0 1.0	
Prestroke mm Tolerance mm	: +-	3.25 0.05	

Tolerance mm Check	:	+-	0.05
tolerance mm	:	+-	0.10
Rack travel in mm Tolerance mm	:		10.50

Firing order	:	1- 5-	3	6-	2-
		/.			

Phasing	: 0-60-120-180-240
	· - 300

BASIC	SETTING

Rated speed	rpm	:	1300
Rack travel	in mm	:	11.15

Tolerance mm	-	0.05
Del. quantity cm3/1000 strokes	:	99.0
Talananaa		

cm3/1000 strokes	: +-	1.0
Check tolerance cm3/1000s.	; +-	3.0

Spreed Tolerance cm3/1000 strokes	:	3.5
Check tolerance cm3/1000s.	:	8.0

Rated speed rpm	: 300	Del. quantity cm3/1000 strokes Tolerance	
Dool Assured &s me	. 7.00	cm3/1000 strokes	: +- 1.0
Rack travel in mm Tolerance mm Del. quantity		Check tolerance cm3/1000s. Spreed	: +- 3.0
cm3/1000 strokes Tolerance	: 11.0	Tolerance cm3/1000 strokes	: 3.5
cm3/1000 strokes	: 2.0	Check tolerance	
Check tolerance cm3/1000S.	: + 4.5	cm3/1000s.	: 8.0
Spreed Tolerance	<u> </u>		
cm3/1000 strokes	: 5.5	CONTROL LEVER	
Check tolerance cm3/1000S.	: 9.0	control lever	
	‡	position degree tolerance degree	
(B) SETTING OF INJ	ECTION PUMP	_	
WITH GOVERNOR	‡	RATED SPEED	
		rack travel mm	
GUIDE SLEEVE TRAVE	<u> </u>	Rated speed rpm Tolerance 1/min	
Rated speed rpm	: 300	roterance rimin	; +- 3
guide sleeve	· 300	rack travel mm	: 4.00
travel mm	: 1.05	Rated speed rpm	
	: +- 0.25	Tolerance 1/min	
	: 1500	rack travel mm	: 0.50
guide sleeve	<u> </u>	Tolerance mm	: +- 0.50
_ = -	: 8.55	Rated speed rpm	: 1650
Tolerance mm	: + 0.05		
•	: 500		
guide sleeve	, ss	LOW IDLE	
travel mm	2.55		
Tolerance mm	: + 0.25	control lever	
Rated speed rpm	: 750	position degree	: 68.0
guide sleeve	+	tolerance degree	
travel mm	: 4.20		
Tolerance mm	: + 0.10	Testing:	
		Rated speed rpm	: 300
GUIDE SLEEVE POSIT	ION	rack travel mm Tolerance mm	: 7.00 : +- 0.10
Rated speed rpm	: 1500		: 100
Rack travel in mm	: 16.50	Rated speed rpm	: 100
Tolerance mm		CRT mm min.	: > 8.00
FULL LOAD DELIVERY	AT FULL LOAD STOP	TORQUE CONTROL	
	+		. 1700
Rated speed rpm	: 1300	Rated speed rpm rack travel mm	
Aneroid pressure hPa	: 700	Tolerance mm	: +- 0.05
iii G		10to, dilec um	· · · · · · · · · · · · · · · · · · ·

Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST	: 11.15 : + 0.05	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 60.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0
SETTING	F00	Spreed Tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 + : 700 + : 11.15 + : + 0.05	cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0
MEASUREMENT	+	BREAKAWAY
Pressure hPa Rated speed rpm Rated speed rpm Pressure hPa	:	Rack travel in mm : 10.10 Rated speed rpm : 1365 Tolerance 1/min : +- 5
rack travel mm Tolerance mm	: 0.40 : + 0.10	STARTING FUEL DELIVERY
Pressure hPa rack travel mm Tolerance mm	: 450 : 1.05 : +- 0.05	Rated speed rpm : 100 rack travel mm : 13.70 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 84.0
START CUT-OUT	+	Tolerance cm3/1000 strokes : +- 7.5
Rated speed rpm Rated speed rpm		Check tolerance cm3/1000s. : +- 10.0
Check speed 1/min Check	:> 80) OH TOLE
speed 1/min	: < 240	LOW IDLE
FUEL DELIVERY CHA	ARACTERISTICS	Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 11.0
Aneroid pressure hPa	: 700 : 700	Tolerance cm3/1000 strokes : +- 2.0 Check tolerance
Rated speed rpm Del. quantity cm3/1000 strokes	+	cm3/1000s. : +- 4.5 Spreed
Tolerance cm3/1000 strokes	: +- 2.0	Tolerance cm3/1000 strokes : 5.5
Check tolerance cm3/1000s.	: +- 4.0	Check tolerance cm3/1000S. : 9.0
Spreed Tolerance cm3/1000 strokes	: 5.0	
Check tolerance cm3/1000s.	: 8.0	
	·	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 27.06.96 Edition Test oil : ISO 4113

Combination No. : 9 400 087 506

Injection pump

Pump designation : PES6P120A320/3RS3365

EP type number : 9 400 087 092

Governor

Governer design. : RSV450...900P1A628

Governer no. : 9 420 082 333

Cust. part No. :

Customer-spec. information Customer : CUMMINS : 6CTAAG Motor Power KW : 240.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

: 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 3.40
Tolerance mm : + 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

*NW after s.o.d. : 7.50 : +- 0.10 Tolerance

Check

tolerance °NW : +- 0.23

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 11.85 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 262.0

Tolerance

cm3/1000 strokes : +- 1.0

	+ Check tolerance
Check tolerance cm3/1000s. : +- 4.0	cm3/1000s. : 9.0
Spreed	
Tolerance cm3/1000 strokes : 5.0	+ CONTROL LEVER + control lever
Check tolerance	+ position degree : 59.0
cm3/1000s. : 9.0	tolerance degree : +- 4.0
Rated speed rpm : 450	control lever
	position degree : 109.0
Rack travel in mm : 4.50	tolerance degree : +- 4.0
Tolerance mm : +- 0.10	I
Del. quantity	ASSEMBLY GOVERNOR SETTING
cm3/1000 strokes : 18.0	+
Tolerance	+ Rated speed rpm : 942
cm3/1000 strokes : +- 3.0	+ rack travel mm : 10.80
Check tolerance	Dated aread man . 002
cm3/1000s. : +- 6.0 Spreed	+ Rated speed rpm : 982 + Tolerance 1/min : +- 4
Tolerance	+ rack travel mm : 4.00
cm3/1000 strokes : 8.0	+
Check tolerance	+ rack travel mm : 0.50
cm3/1000s. : 12.0	+ Tolerance mm : + 0.50
	+ Rated speed rpm : 1030
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 943
WITH GOVERNOR	+ rack travel mm : 10.80
WITH GOVERNOR	+
	+ Rated speed rpm : 983
	+ Tolerance 1/min : +- 4
GUIDE SLEEVE POSITION	† rack travel mm : 4.00
Rated speed rpm : 800	rack travel mm : 0.50
	+ Tolerance mm : +- 0.50
Rack travel in mm : 0.50	+ Rated speed rpm : 1030
Tolerance mm : +- 0.20	† 2.4 d
	+ Rated speed rpm : 944 + rack travel mm : 10.80
governor spring pre-tension	T I GUN CI AVEC IIIII . 30.00
click setting x : 5.75	Rated speed rpm : 984
	+ Tolerance 1/min : +- 4
	rack travel mm : 4.00
FULL LOAD DELIVERY AT FULL LOAD STOP	+ rack travel mm : 0.50
Rated speed rpm : 900	+ rack travel mm : 0.50 + Tolerance mm : +- 0.50
Aneroid pressure	Rated speed rpm : 1030
hPa : -	+
Del. quantity	+ Rated speed rpm : 945
cm3/1000 strokes : 262.0	+ rack travel mm : 10.80
Tolerance	+ Rated speed rpm : 985
cm3/1000 strokes : +- 1.0 Check tolerance	+ Rated speed rpm : 985 + Tolerance 1/min : +- 4
cm3/1000s. : +- 4.0	rack travel mm : 4.00
Spreed	+
Tolerance	rack travel mm : 0.50
cm3/1000 strokes : 5.0	+ Tolerance mm : + 0.50

1030 Rated speed rpm : 946 Rated speed rpm rack travel mm 10.80 986 Rated speed rpm Tolerance 1/min 4 rack travel mm 4.00 0.50 rack travel mm : **←** 0.50 Tolerance mm Rated speed rpm 1030 947 Rated speed rpm 10.80 rack travel mm 987 Rated speed rpm Tolerance 1/min 4.00 rack travel mm rack travel mm 0.50 : +- 0.50 Tolerance mm 1030 Rated speed rpm LOW IDLE control lever position degree 81.0 tolerance degree : +control lever position degree 31.0 tolerance degree : +-4.0 Setting point w/out bumper spring Rated speed rpm 450 4.00 rack travel mm Testing: 450 Rated speed rpm 4.50 rack travel mm : + 0.10Tolerance mm 2.00 rack travel mm Rated speed rpm 485 30 Tolerance 1/min 100 Rated speed rpm : > 19.00 CRT mm min. TORQUE CONTROL

900

11.85

Tolerance mm : +- 0.05 STARTING FUEL DELIVERY Rated speed rpm 100 : 20.00 rack travel mm : : +- 1.00 Tolerance mm Del. quantity cm3/1000 strokes : 302.0 Tolerance cm3/1000 strokes : +- 10.0Check tolerance cm3/1000s. : +- 14.0 LOW IDLE Rated speed rpm : 450 Del. quantity cm3/1000 strokes : 18.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 : +-Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance 12.0 cm3/1000s.

End of test specification sheet

Rated speed rpm

rack travel mm

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 17.06.96 : ISO 4113

Combination No. : 9 400 030 707

Injection pump

Pump designation : PES6A100D320/3RS3511

EP type number : 9 410 037 253

Governor

Governer design. : RQV400...1250AB1320R

Governer no. : F 002 A30 000

Cust. part No. : TATA-CUMMINS

Customer-spec. information Customer : CUMMINS

Motor

: 6BT - 145 BHP

TEST BENCH REQUIREMENTS

Inlet line : 3.2;

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 9 451 037 430

Inlet press. bar :

2.0

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

: 208.5

Tolerance bar

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

: 3.60 : +- 0.05 Prestroke mm

Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

*NW after s.o.d. : 5.00 Tolerance : +- 0.10

Check

tolerance °NW : +- 0.29

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 12.25 Tolerance mm : \leftarrow 0.05

Rack travel in mm : 7.70

Tolerance mm : +- 0.10

(B) SETTING OF IN WITH GOVERNOR	NJECTION PUMP	Rated speed rpm Tolerance 1/min	
GUIDE SLEEVE TRAV	+	rack travel mm Rated speed rpm Tolerance 1/min	: 1450
Rated speed rpm		rack travel mm	: 0.50
guide sleeve travel mm Tolerance mm	. 171 I	Tolerance mm	
Tolerance mm	+ 0.20	Rated speed rom	
rocci di lec ililii	1	warea opeca i om	. 1565
Rated speed rpm guide sleeve travel mm	: 1347		
travel mm	: 8.48 +	LOW IDLE	
Tolerance mm	: +- 0.15 +		
Rated speed rpm quide sleeve	: 880	control lever position degree	: 15.0
travel mm	: 4.97	tolerance degree	: +- 4.0
guide sleeve travel mm Tolerance mm	: +- 0.25 +	_	
	+	Testing:	
Rated speed rpm	: 499	Data a ana a a	
guide sleeve	. 275	Rated speed rpm	: 400
travel mm Tolerance mm	: + 0.25	rack travel mm Tolerance mm	· + 0.10
TO CET GITCE THAT	1	TOCCI di ICC IMII	0.70
Rated speed rpm	: 549	rack travel mm	: 2.00
guide sleeve	+	Rated speed rpm	: 720
travel mm	: 3.30 +	Tolerance 1/min	
Tolerance mm	: +- 0.25 +	5	400
5 ()	. 5/0	Rated speed rpm	: 100
Rated speed rpm	: 560	CRT mm min.	• > 0 00
travel mm	. 3 37	CIVI IIII IIIII.	. > 9.00
guide sleeve travel mm Tolerance mm	: +- 0.25		
	+	TORQUE CONTROL	
Rated speed rpm	: 1620 +		
guide sleeve	+	Rated speed rpm	: 1250
travel mm	: 11.50	rack travel mm Tolerance mm	: 12.25
Tolerance mm	: +- 0.50	loterance mm	: +- 0.05
GUIDE SLEEVE POSI	ITION	ANEROID/ALTITUDE COMPENSATOR TEST	
Rated speed rpm	: 1250		
Rack travel in mm Tolerance mm		SETTING	
	+	Rated speed rpm	
	†	Pressure hPa	: 750
CONTROL LEVER		rack travel mm Tolerance mm	
control lever	+	MEASUREMENT	
position degree			
tolerance degree		Pressure hPa	: -
	+	Rated speed rpm	: 750
RATED SPEED	†	rack travel mm Tolerance mm	
rack travel mm	: 11.25	TOTEL ATTE MIN	. +- 0.20

A25

Rated speed rpm : 750 Pressure hPa : 415 rack travel mm : 12.10 Tolerance mm : + 0.10 Pressure hPa : 385 rack travel mm : 11.90 Tolerance mm : +- 0.20 START CUT-OUT Rated speed rpm : > 120 Rated speed rpm : < 300 Check : > speed 1/min 100 Check speed 1/min : < 340 BREAKAWAY Rack travel in mm : 11.25 Rated speed rpm : 1320 Tolerance 1/min : + 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 15.00 Tolerance mm : +- 0.50 End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 29.05.96 Test oil : ISO 4113

Combination No. : 9 400 030 750

Injection pump

Pump designation : PES4A95D320/3RS2880

EP type number : 9 410 037 214

Governor

Governer design. : RSV475...1050A0C865R

Governer no. : F 002 A20 201

Cust. part No. : 3930156

Customer-spec. information Customer : CUMMINS

Motor : CUMMINS-4BTA-3.9

Power KW : 79.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.45
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 9.00 Tolerance : + 0.10

Check

tolerance °NW : +- 0.29

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 13.30 Tolerance mm : +- 0.05

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 115.0

Tolerance	+ Tolerance
cm3/1000 strokes : +- 1.0	+ cm3/1000 strokes : 4.0
	- Check tolerance
Check tolerance	+ cm3/1000s. : 6.5
cm3/1000s. : +- 3.0	1
(1137 1000) 3.0	$oxed{1}$
Spreed	
Tolerance	T CONTROL LEVER
	T CONTROL LEVER
cm3/1000 strokes : 4.0	The second secon
Ob and the language of the lan	control lever
Check tolerance	position degree : 98.0
cm3/1000s. : 6.5	+ tolerance degree : +- 4.0
5 · 4 · 1	†
Rated speed rpm : 475	+ RATED SPEED
	†
	+ rack travel mm : 12.30
Rack travel in mm : 6.25	+ Rated speed rpm : 1110
Tolerance mm : +- 0.10	+ Tolerance 1/min : +- 5
Del. quantity	+
cm3/1000 strokes : 22.0	rack travel mm : 4.00
Tolerance	+ Rated speed rpm : 1190
cm3/1000 strokes : +- 2.0	+ Tolerance 1/min : +- 15
Check tolerance	+
cm3/1000s. : +- 4.5	rack travel mm : 0.85
Spreed	+ Tolerance mm : +- 0.55
Tolerance	+ Rated speed rpm : 1260
cm3/1000 strokes : 6.0	1
Check tolerance	rack travel mm : 4.00
cm3/1000s. : 8.0	+ Rated speed rpm : 1195
CHIS7 10005	T Mateu speed Ipili : 1173
	§
	+
(R) SETTING OF INJECTION PUMP	İ
(B) SETTING OF INJECTION PUMP	I OW TOLF
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
	LOW IDLE
	+
WITH GOVERNOR	control lever
	control lever position degree : 78.0
GUIDE SLEEVE POSITION	control lever
WITH GOVERNOR	control lever position degree : 78.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION Rated speed rpm : 800	control lever position degree : 78.0
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring
GUIDE SLEEVE POSITION Rated speed rpm : 800	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 475
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring
WITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.75
WITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 475
WITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.75 Testing:
WITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.75 Testing: Rated speed rpm : 475
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.50	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.75 Testing: Rated speed rpm : 475 rack travel mm : 6.25
WITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.75 Testing: Rated speed rpm : 475
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.50	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.75 Testing: Rated speed rpm : 475 rack travel mm : 6.25 Tolerance mm : +- 0.10
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.50	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.75 Testing: Rated speed rpm : 475 rack travel mm : 6.25 Tolerance mm : +- 0.10 rack travel mm : 2.00
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.75 Testing: Rated speed rpm : 475 rack travel mm : 6.25 Tolerance mm : +- 0.10 rack travel mm : 2.00
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.75 Testing: Rated speed rpm : 475 rack travel mm : 6.25 Tolerance mm : +- 0.10 rack travel mm : 2.00
WITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 900	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.75 Testing: Rated speed rpm : 475 rack travel mm : 6.25 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 565
WITH GOVERNOR GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 900 Del. quantity	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.75 Testing: Rated speed rpm : 475 rack travel mm : 6.25 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 565 Tolerance 1/min : +- 30
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 900 Del. quantity cm3/1000 strokes : 115.0	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.75 Testing: Rated speed rpm : 475 rack travel mm : 6.25 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 565 Tolerance 1/min : +- 30
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 900 Del. quantity cm3/1000 strokes : 115.0 Tolerance	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.75 Testing: Rated speed rpm : 475 rack travel mm : 6.25 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 565 Tolerance 1/min : +- 30 Rated speed rpm : 100
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 900 Del. quantity cm3/1000 strokes : 115.0 Tolerance cm3/1000 strokes : + 1.0	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.75 Testing: Rated speed rpm : 475 rack travel mm : 6.25 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 565 Tolerance 1/min : +- 30
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 900 Del. quantity cm3/1000 strokes : 115.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.75 Testing: Rated speed rpm : 475 rack travel mm : 6.25 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 565 Tolerance 1/min : +- 30 Rated speed rpm : 100
GUIDE SLEEVE POSITION Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 900 Del. quantity cm3/1000 strokes : 115.0 Tolerance cm3/1000 strokes : + 1.0	control lever position degree : 78.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.75 Testing: Rated speed rpm : 475 rack travel mm : 6.25 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 565 Tolerance 1/min : +- 30 Rated speed rpm : 100

: 1050 Rated speed rpm 13.30 rack travel mm : +- 0.05 Tolerance mm

Rated speed rpm 750 14.30 rack travel mm : : +- 0.20 Tolerance mm

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 900 Pressure hPa

MEASUREMENT

Pressure hPa Rated speed rpm 500 : 10.90 rack travel mm : +- 0.20 Tolerance mm

500 Rated speed rpm

600 Pressure hPa 13.30 rack travel mm Tolerance mm : +- 0.20

400 Pressure hPa 12.10 rack travel mm : +- 0.20 Tolerance mm

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

900 hPa 750 Rated speed rpm

Del. quantity

cm3/1000 strokes : 129.2

Tolerance

cm3/1000 strokes : \leftarrow 2.0

Check tolerance

cm3/1000s. 4.0

Aneroid pressure

hPa 500 Rated speed rpm

Del. quantity cm3/1000 strokes :

Tolerance

71.8

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. : +--3.0 BREAKAWAY

Rack travel in mm : 12.30 Rated speed rpm : 1110 Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm 100 rack travel mm 20.50 Tolerance mm : +- 0.50

Del. quantity

cm3/1000 strokes : 121.4

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : +- 15.0

LOW IDLE

475 Rated speed rpm : Del. quantity

cm3/1000 strokes : 22.0

Tolerance

cm3/1000 strokes : +-2.0

Check tolerance cm3/1000s.

4.5 Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s.8.0 :

End of test specification sheet

B01

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 28.06.96 Edition : ISO 4113 Test oil

Combination No. : 0 402 066 709

Injection pump

Pump designation : PES6P120A120RS3358 EP type number : 0 412 026 784

Governor

Governer design. : RSV475...1100P0A632 Governer no. : 0 421 833 539

Cust, part No. : 3929602

Customer-spec. information Customer : CDC

: 6BTA ELITE Motor Power KW : 130.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 2.0 Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85 Tolerance mm : +- 0.05 Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5- 3- 6- 2-: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.30

Check

tolerance °NW : + 0.50

Start of delivery blocking

*NW after s.o.d. : 6.75 Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.20 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 138.5	+ Check tolerance + cm3/1000s. : +- 3.0 + Spreed
Tolerance cm3/1000 strokes : +- 1.0	Tolerance + cm3/1000 strokes : 4.0
Check tolerance cm3/1000s. : +- 3.0	+ Check tolerance + cm3/1000S. : 7.5 +
	+
Spreed Tolerance cm3/1000 strokes : 4.0	CONTROL LEVER control lever
Check tolerance cm3/1000s. : 7.5	position degree : 93.0 tolerance degree : +- 4.0
Rated speed rpm : 475	RATED SPEED
Rack travel in mm : 5.40 Tolerance mm : + 0.20	rack travel mm : 10.20 Rated speed rpm : 1145 Tolerance 1/min : +- 5
Del. quantity cm3/1000 strokes : 24.5 Tolerance	rack travel mm : 5.70 Rated speed rpm : 1230
cm3/1000 strokes : +- 2.0 Check tolerance	Tolerance 1/min : +- 5
cm3/1000s. : + 4.5 Spreed	rack travel mm : 0.85 Tolerance mm : +- 0.55
Tolerance cm3/1000 strokes : 6.0 Check tolerance	+ Rated speed rpm : 1400
cm3/1000s. : 9.0	LOW IDLE
(B) SETTING OF INJECTION PUMP	†
WITH GOVERNOR	control lever position degree : 78.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	Setting point w/out bumper spring
	+
Rated speed rpm : 800	+ Rated speed rpm : 475 + rack travel mm : 4.90
Rack travel in mm : 0.50 Tolerance mm : +- 0.20	Testing:
governor spring	Rated speed rpm : 475
pre-tension - click setting x : 2.50 -	rack travel mm : 5.40 Tolerance mm : +- 0.20
titick setting x . 2.30	+
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1100	CRT mm min. : < 19.00
Aneroid pressure hPa : 1500	TORQUE CONTROL
Del. quantity - cm3/1000 strokes : 138.5 -	Rated speed rpm : 1100
Tolerance -	rack travel mm : 11.20
cm3/1000 strokes : +- 1.0	+ Tolerance mm : +- 0.05

Rated speed rpm rack travel mm Tolerance mm	: 750 : 12.00 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500 : 1500
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 8.45 : +- 0.20
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 975 : 11.20 : ← 0.20
Pressure hPa rack travel mm Tolerance mm	: 575 : 9.50 : +- 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1500 : 750
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1500
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1500 : 750
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 1500 : 750 : 170.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1500 : 750 : 170.0 : + 3.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 1500 : 750 : 170.0 : + 3.0 : + 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 1500 : 750 : 170.0 : + 3.0 : + 6.0 : 8.0 : 12.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 1500 : 750 : 170.0 : + 3.0 : + 6.0 : 8.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: 1500 : 750 : 170.0 : + 3.0 : + 6.0 : 8.0 : 12.0

Check tolerance cm3/1000s.	: +- 4.0			
BREAKAWAY				
Rack travel in mm Rated speed rpm Tolerance 1/min	: 1145			
STARTING FUEL DEL	STARTING FUEL DELIVERY			
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 21.00 : + 0.50 : 165.0 : + 20.0 : + 25.0			
LOW IDLE				
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 475 : 24.5 : + 2.0 : + 4.5 : 6.0 : 9.0			
End of test specif	fication sheet			

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 28.06.96 : ISO 4113

Combination No. : 0 402 736 872

Injection pump

Pump designation : PES6P120A120RS7353

EP type number : 0 412 726 924

Governor

Governer design. : RQV350...1100PA1177K

Governer no. : 0 421 815 443

Cust. part No. : 3928154

Customer-spec. information Customer : CDC Motor : 6CTA-A : 186.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar

Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05 Check tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 5.50 : +- 0.50 Tolerance

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 13.70 Tolerance mm : \leftarrow 0.05

B05

Del. quantity cm3/1000 strokes : 216.5	+ Rated speed rpm : 1510 + guide sleeve + travel mm : 13.50
Tolerance cm3/1000 strokes : +- 1.0	Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : +- 4.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000
Spreed Tolerance	+ Aneroid pressure + hPa : 1200
cm3/1000 strokes : 5.0	+ Del. quantity + cm3/1000 strokes : 216.5
Check tolerance cm3/1000s. : 9.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Rated speed rpm : 350	+ cm3/1000s. : +- 4.0 + Spreed
Rack travel in mm : 6.50 Tolerance mm : +- 0.20	+ Tolerance + cm3/1000 strokes : 5.0 + Check tolerance
Del. quantity cm3/1000 strokes : 25.0	cm3/1000s. : 9.0
Tolerance cm3/1000 strokes : +- 3.0 Check tolerance	CONTROL LEVER
cm3/1000s. : +- 5.0 Spreed	t control lever
Tolerance cm3/1000 strokes : 8.0	<pre>position degree : 119.0 tolerance degree : +- 6.0</pre>
Check tolerance cm3/1000s. : 12.0	RATED SPEED
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 12.40 Rated speed rpm : 1165 Tolerance 1/min : +- 15
GUIDE SLEEVE TRAVEL	+ rack travel mm : 4.00 + Rated speed rpm : 1300 + Tolerance 1/min : +- 5
Rated speed rpm : 350 guide sleeve travel mm : 1.84 Tolerance mm : +- 0.15	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1400
Rated speed rpm : 1081 guide sleeve	<u> </u>
travel mm : 8.77 Tolerance mm : +- 0.15	+ LOW IDLE
Rated speed rpm : 461 guide sleeve travel mm : 3.50 Tolerance mm : + 0.25	control lever position degree : 68.5 tolerance degree : +- 6.0
Rated speed rpm : 370 guide sleeve travel mm : 2.50 Tolerance mm : +- 0.25	Testing: Rated speed rpm : 350 rack travel mm : 6.50 Tolerance mm : + 0.20

Rated speed rpm : 275 510 FUEL DELIVERY CHARACTERISTICS : > 8.10 CRT mm min. 0.50 Rated speed rpm : 425 Aneroid pressure 1200 hPa Rated speed rpm 650 JLL LOAD STOP TORQUE CONTROL Del. quantity cm3/1000 strokes : 208.0 100 Rated speed rpm : 1000 Tolerance rack travel mm : 13.70 cm3/1000 strokes : +- 3.0200 : +- 0.05 Check tolerance Tolerance mm cm3/1000S.: +- 6.0 216.5 Rated speed rpm : 650 Spreed 13.30 Tolerance 1.0 rack travel mm : +- 0.20 Tolerance mm cm3/1000 strokes : 8.0 Check tolerance 4.0 Rated speed rpm : 1100 rack travel mm : 13.50 Tolerance mm : + 0.10 cm3/1000s. 12.0 Aneroid pressure 5.0 hPa Rated speed rpm : 1000 9.0 ANEROID/ALTITUDE Del. quantity cm3/1000 strokes : COMPENSATOR TEST 96.5 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance SETTING : +- 3.0 cm3/1000S.19.0 Rated speed rpm : 1000 Pressure hPa 1200 6.0 **BREAKAWAY MEASUREMENT** Rack travel in mm : 12.40
Rated speed rpm : 1165
Tolerance 1/min :

15 12.40 Pressure hPa : 1000 : 9.2 Rated speed rpm 65 : 9.25 : + 0.20 rack travel mm Tolerance mm 4.00 Rated speed rpm : 1000 STARTING FUEL DELIVERY Pressure hPa Rated speed rpm : 100 rack travel mm : 12.50 rack travel mm 13.20 0.50 : +- 0.20 0.50 Tolerance mm : +- 0.50 Tolerance mm 00 325 Pressure hPa Del. quantity rack travel mm : 10.65 Tolerance mm : + 0.05 cm3/1000 strokes : 190.0 Tolerance cm3/1000 strokes : +- 20.0Check tolerance cm3/1000s.: +- 25.0 START CUT-OUT 100 68.5 Rated speed rpm :> Rated speed rpm : < 290 6.0 LOW IDLE Check speed 1/min ; > 80 Rated speed rpm : 350 ;50 Check speed 1/min : < 300 Del. quantity 6.50 om3/1000 strokes : 25.0 0.20 **B**07

0.20 40 6.00 0.05

Note remarks

Refer to Service Info for test and adjustment instructions.

BOSCH INJ. PUMP TEST SPECIFICATIONS

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

Tolerance cm3/1000 strokes	: +-	3.0
Check tolerance cm3/1000s.	: +-	5.0
Spreed Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 02.07.96 : ISO 4113

Combination No. : 0 402 746 611

Injection pump

Pump designation : PES6P120A320RS7372

EP type number : 0 412 726 940

Governor

Governer design. : RQV250...1400PA1279K

Governer no. : 0 421 815 508

Cust. part No. : 3866783

Customer-spec. information Customer : CDC

Motor

: 6BTA

: 235.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar :

2.0

Tolerance bar : + 0.1

Test nozzle holde assembly

: 1 688 901 103

Opening pressure

bar

: 208.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

B09

x inside diameter: 3.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Tolerance bar : +- 1.0

Prestroke mm Tolerance mm 4.00

: +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

: +- 0.75 tolerance °NW

Start of delivery blocking

*NW after s.o.d. : 11.00

Tolerance : +- 0.50

Check

: +- 0.75 tolerance °NW

Barrel no.

:

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 13.85

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 195.5	Rated speed rpm : 1860 guide sleeve travel mm : 13.50
Tolerance cm3/1000 strokes : +- 1.0	- Tolerance mm : +- 0.50
Check tolerance - cm3/1000s. : +- 4.0 -	FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	- Rated speed rpm : 1400 - Aneroid pressure - hPa : 1200
cm3/1000 strokes : 8.0	Del. quantity - cm3/1000 strokes : 195.5
Check tolerance cm3/1000s. : 12.0	- Tolerance - cm3/1000 strokes : +- 1.0
Rated speed rpm : 300	- Check tolerance - cm3/1000s. : +- 4.0 - Spreed
Rack travel in mm: 7.10	- Tolerance - cm3/1000 strokes : 8.0 - Check tolerance
Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 29.0	- cm3/1000s. : 12.0
Tolerance cm3/1000 strokes : +- 3.0	
Check tolerance cm3/1000s. : +- 5.0 Spreed	- CONTROL LEVER - control lever
Tolerance cm3/1000 strokes : 5.0	position degree : 118.5 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 8.0	- RATED SPEED
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	- rack travel mm : 12.80 - Rated speed rpm : 1465 - Tolerance 1/min : +- 5
GUIDE SLEEVE TRAVEL	- rack travel mm : 6.80 - Rated speed rpm : 1580 - Tolerance 1/min : +- 15
Rated speed rpm : 275 guide sleeve travel mm : 1.39	- - rack travel mm : 0.50 - Tolerance mm : +- 0.50
Tolerance mm : +- 0.20 +- Rated speed rpm : 1455 +- Rated speed rpm :	- Rated speed rpm : 1725 -
guide sleeve + 9.16	LOW IDLE
Tolerance mm : +- 0.15	- -
Rated speed rpm : 931 guide sleeve travel mm : 5.67	- control lever - position degree : 74.5 - tolerance degree : +- 4.0
Tolerance mm : +- 0.25	Testing:
Rated speed rpm : 480 guide sleeve travel mm : 3.18 Tolerance mm : + 0.25	Rated speed rpm : 300 rack travel mm : 7.10 Tolerance mm : +- 0.20

Rated speed rpm	: 200 +	
CRT mm min.	: > 8.60	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm	: 350	Aneroid pressure hPa : 1200 Rated speed rpm : 1000
TORQUE CONTROL	‡	Del. quantity cm3/1000 strokes : 185.5
Rated speed rpm rack travel mm Tolerance mm	: 13.85 +	Tolerance cm3/1000 strokes : +- 3.0 Check tolerance
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 13.60 : + 0.10	<pre>cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0</pre>
Rated speed rpm	+	Check tolerance cm3/1000s. : 12.0
rack travel mm Tolerance mm	: 13.15 +	Aneroid pressure hPa : -
ANEROID/ALTITUDE COMPENSATOR TEST	+	Rated speed rpm : 1000 Del. quantity cm3/1000 strokes : 110.0 Tolerance
SETTING	<u>†</u>	cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0
Rated speed rpm Pressure hPa	: 1400 : 1200	
MEASUREMENT	‡	BREAKAWAY
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 10.30 +	Rack travel in mm : 12.80 Rated speed rpm : 1465 Tolerance 1/min : +- 5
Rated speed rpm	+	STARTING FUEL DELIVERY
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	+	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 21.00 Tolerance mm : +- 0.50
Pressure hPa rack travel mm	: 1400 : 620 : 12.90	Rated speed rpm : 100
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm	: 1400 : 620 : 12.90 : + 0.20 : 280 : 11.30	Rated speed rpm : 100 rack travel mm : 21.00 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 175.0 Tolerance
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 1400 : 620 : 12.90 : + 0.20 : 280 : 11.30	Rated speed rpm : 100 rack travel mm : 21.00 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 175.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm START CUT-OUT Rated speed rpm	: 1400 : 620 : 12.90 : + 0.20 : 280 : 11.30 : + 0.20	Rated speed rpm : 100 rack travel mm : 21.00 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 175.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance

Tolerance		
cm3/1000 strokes	: +-	3.0
Check tolerance		
cm3/1000s.	: +-	5.0
Spreed		
Tolerance		
cm3/1000 strokes	:	5.0
Check tolerance		
cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 03.07.96 : ISO 4113

Combination No. : 0 403 466 150

Injection pump

Pump designation : PES6MW100/120RS1238

EP type number : 0 413 406 237

Governor

Governer design. : RSV500...1100MW2A366

Governer no. : 0 420 085 249

Cust. part No. : 3929165

Customer-spec. information Customer : CDC : 6 CT Motor Power KW : 138.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.80
Tolerance mm : + 0.05 : +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 8.00 : +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

15.00 travel Difference ° CS : 2.00

BASIC SETTING

B13

Rated speed rpm : 1100	- Aneroid pressure
	- hPa : 1200 - Del. quantity
Rack travel in mm: 10.80	- cm3/1000 strokes : 130.0
Tolerance mm : +- 0.05	- Tolerance - cm3/1000 strokes : +- 1.0
Del. quantity	- cm3/1000 strokes : +- 1.0 - Check tolerance
cm3/1000 strokes : 130.0	- cm3/1000s. : +- 4.0
Talana and a	- Spreed
Tolerance +- 1.0 +	- Tolerance - cm3/1000 strokes : 4.0
	- Check tolerance
Check tolerance	- cm3/1000s. : 7.5
cm3/1000s. : +- 4.0	- -
Spreed	
Tolerance +	- CONTROL LEVER
cm3/1000 strokes : 4.0	- - control lever
Check tolerance	- position degree : 97.0
cm3/1000s. : 7.5	tolerance degree : +- 4.0
Rated speed rpm : 500	- - RATED SPEED
The control of the co	•
T	- rack travel mm : 9.80
Rack travel in mm : 5.50 + Tolerance mm : + 0.10 +	- Rated speed rpm : 1160 - Tolerance 1/min : +- 5
Tolerance mm : + 0.10 + Del. quantity +	- Tolerance 1/min : +- 5
cm3/1000 strokes : 26.5	rack travel mm : 6.20
Tolerance	- Rated speed rpm : 1205
cm3/1000 strokes : +- 2.0 +	- Tolerance 1/min : +- 5
Check tolerance + 4.5 + 4.5	- - rack travel mm : 1.00
cm3/1000s. : +- 4.5 + Spreed +	- Tolerance mm : +- 0.70
Tolerance	- Rated speed rpm : 1350
cm3/1000 strokes : 3.5	-
Check tolerance + 5.5 + 5.5	
	- LOW IDLE
+	•
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	control lever position degree : 84.0
	tolerance degree : +- 4.0
GUIDE SLEEVE POSITION +	Setting point w/out bumper spring
Rated speed rpm : 800	Rated speed rpm : 500
Rated speed (pill : 000	rack travel mm : 5.00
Rack travel in mm: 0.50	•
Tolerance mm : + 0.20	Testing:
governor spring	Rated speed rpm : 500
pre-tension +	rack travel mm : 5.50
click setting x : 3.50	Tolerance mm : +- 0.10
+	. Dotod chood not 100
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
TOLL LOND VELLIVENT AT TOLL LOND STOT	CRT mm min. : > 19.00
Rated speed rpm : 1100	

TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 10.80 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 11.35 : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 11.15 : ← 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500 : 1200
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 10.50 : +- 0.20
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 550 : 10.90 : +- 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure APA Rated speed rpm Del. quantity	: 1200 : 750
cm3/1000 strokes Folerance	: 140.0
cm3/1000 strokes Check tolerance	: +- 2.0
m3/1000s. Spreed	: +- 5.0
Tolerance cm3/1000 strokes	: 6.0
Check tolerance cm3/1000S.	: 9.0

Rated speed rpm Del. quantity	· · 500
cm3/1000 strokes	: 121.0
Tolerance cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	: +- 3.0
CIII 37 (0003.	. 1 3.0
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 9.80 : 1160 : +- 5
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
rack travel mm Tolerance mm	: 20.50 : +- 1.00
Del. quantity cm3/1000 strokes	: 177.0
Tolerance cm3/1000 strokes	: +- 10.0
Check tolerance cm3/1000s.	: +- 13.0
LOW IDLE	
Rated speed rpm Del. quantity	: 500
cm3/1000 strokes	: 26.5
Tolerance cm3/1000 strokes	: +- 2.0
Check tolerance cm3/1000s.	: +- 4.5
Spreed Tolerance	
cm3/1000 strokes Check tolerance	: 3.5
cm3/1000s.	: 5.5
End of test speci	6

Aneroid pressure

hPa

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 27.06.96 Edition Test oil : ISO 4113

Combination No. : 9 400 030 737

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV475...1100A0C850R

Governer no. : 9 420 034 716

Cust. part No. : 3929409

Customer-spec. information Customer : CDC Motor : 687 Power KW : 90.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0
Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : +- 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

: **←** 0.50 Tolerance

Check

tolerance $^{\circ}NW$: + 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00

Tolerance : +- 0.50 Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 10.25 Tolerance mm : +- 0.05

B16

Del. quantity cm3/1000 strokes : 81.5	- Check tolerance - cm3/1000s. : +- 3.0 - Spreed
Tolerance cm3/1000 strokes : +- 1.0	- Tolerance - cm3/1000 strokes : 4.0
Check tolerance cm3/1000s. : +- 3.0	- Check tolerance - cm3/1000s. : 6.5 -
	•
Spreed Tolerance cm3/1000 strokes : 4.0	- CONTROL LEVER - control lever
Check tolerance cm3/1000s. : 6.5	position degree : 97.0 tolerance degree : +- 4.0
Rated speed rpm : 475	- RATED SPEED
Rack travel in mm: 5.10 Tolerance mm: + 0.10	rack travel mm : 9.20 Rated speed rpm : 1165 Tolerance 1/min : +- 5
Del. quantity cm3/1000 strokes : 18.5 Tolerance	rack travel mm : 4.50 Rated speed rpm : 1215
cm3/1000 strokes : +- 2.0 +- Check tolerance +-	- Tolerance 1/min : +- 5
cm3/1000s. : +- 4.5 Spreed	rack travel mm : 0.85 Tolerance mm : +- 0.55
Tolerance + 6.0 + Check tolerance + Check tolera	- Rated speed rpm : 1300
cm3/1000s. : 8.0	LOW IDLE
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	control lever position degree : 85.5 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	Setting point w/out bumper spring
Rated speed rpm : 800	Rated speed rpm : 475 rack travel mm : 4.60
Rack travel in mm : 0.50 + Tolerance mm : +- 0.20 +	Testing:
governor spring	Rated speed rpm : 475
pre-tension the click setting x : 5.00	rack travel mm : 5.10 Tolerance mm : +- 0.10
ttick setting x . 3.00	
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100 CRT mm min. :> 19.00
Rated speed rpm : 1100	CALL DRIE DE 111
Aneroid pressure hPa : 900 Del. quantity	TORQUE CONTROL
cm3/1000 strokes : 81.5 +	Rated speed rpm : 1100
Tolerance + 1.0 +	rack travel mm : 10.25 Tolerance mm : +- 0.05

: 800 : 10.90 : +- 0.10
: 800 : 900
: - : 800 : 8.70 : + 0.20
: 800
: 450 : 10.50
: 10.50 : +- 0.20
: +- 0.20 : 275 : 9.50
: +- 0.20 : 275 : 9.50 : +- 0.20
: +- 0.20 : 275 : 9.50 : +- 0.20 RACTERISTICS : 900
: +- 0.20 : 275 : 9.50 : +- 0.20 RACTERISTICS : 900 : 800
: +- 0.20 : 275 : 9.50 : +- 0.20 RACTERISTICS : 900 : 800 : 93.0 : +- 2.0 : +- 4.0 : : 800
: +- 0.20 : 275 : 9.50 : +- 0.20 RACTERISTICS : 900 : 800 : 93.0 : +- 2.0 : +- 4.0 :

Rack travel in mm	:	9.20)
Rated speed rpm	:	1165	
Tolerance 1/min	:	+- 5	5

STARTING FUEL DELIVERY

Rated speed rpm	: 100
	: 20.50
Tolerance mm	: +- 0.50
Del. quantity	
cm3/1000 strokes	: 120.5
Tolerance	
cm3/1000 strokes	: +- 10.0
Check tolerance	
c m 3/1000s.	: +- 15.0

LOW IDLE

Rated speed rpm Del. quantity	:	475
cm3/1000 strokes	:	18.5
cm3/1000 strokes Check tolerance	: +-	2.0
cm3/1000s. Spreed	: +-	4.5
Tolerance		
cm3/1000 strokes Check tolerance	:	6.0
cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.06.96 Test oil : ISO 4113

Combination No. : 9 400 030 738

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV475...1100A0C851R

Governer no. : 9 420 034 717

Cust. part No. : 3929408

Customer-spec. information : CDC Customer : 6BT Motor : 98.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 : +- 0.1 Tolerance bar

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm 2.85 : +- 0.05 Tolerance mm Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 : +- 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00 : +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.05 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 92.5	Check tolerance cm3/1000s. : +- 3.0 Spreed
Tolerance cm3/1000 strokes : +- 1.0	Tolerance cm3/1000 strokes : 4.0 Check tolerance
Check tolerance cm3/1000s. : +- 3.0	cm3/1000s. : 6.5
Spreed Tolerance cm3/1000 strokes : 4.0	CONTROL LEVER
	position degree : 96.0 tolerance degree : +- 4.0
Rated speed rpm : 475	RATED SPEED
Rack travel in mm: 5.10	rack travel mm : 10.00 Rated speed rpm : 1165 Tolerance 1/min : +- 5
cm3/1000 strokes : 18.5	rack travel mm : 4.50 Rated speed rpm : 1215 Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : + 4.5	rack travel mm : 0.85 Tolerance mm : +- 0.55
cm3/1000 strokes : 6.0 + Check tolerance +	Rated speed rpm : 1300
cm3/1000s. : 8.0	LOW IDLE
+	control lever position degree : 85.5 tolerance degree : + 4.0
GUIDE SLEEVE POSITION	Setting point w/out bumper spring
+	Rated speed rpm : 475 rack travel mm : 4.60
Rack travel in mm : 0.50 Tolerance mm : + 0.20	Testing:
pre-tension +	Rated speed rpm : 475 rack travel mm : 5.10 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1100	CRT mm min. : > 19.00
Aneroid pressure hPa : 900 + Del. quantity +	TORQUE CONTROL
cm3/1000 strokes : 92.5 Tolerance	Rated speed rpm : 1100 rack travel mm : 11.05 Tolerance mm : +- 0.05

B20

Rated speed rpm rack travel mm Tolerance mm	: 800 : 11.80 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 800 : 900
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 800 : 8.70 : ← 0.20
Rated speed rpm	: 800
Pressure hPa rack travel mm Tolerance mm	: 650 : 11.20 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 350 : 9.50 : +- 0.20
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 900 : 800
cm3/1000 strokes Tolerance	: 104.0
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000S.	: +- 4.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: - : 800 : 65.5
Tolerance cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	: +- 3.0

Rack travel in mm : 10.00
Rated speed rpm : 1165
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 120.5 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s. : +- 15.0

LOW IDLE

Rated speed rpm : 475

Del. quantity
cm3/1000 strokes : 18.5

Tolerance
cm3/1000 strokes : + 2.0

Check tolerance
cm3/1000s. : + 4.5

Spreed

Tolerance
cm3/1000 strokes : 6.0

Check tolerance
cm3/1000 strokes : 8.0

End of test specification sheet

BREAKAWAY

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 28.06.96 Test oil : ISO 4113

Combination No. : 0 401 876 784

Injection pump

Pump designation : PE6P12OA32ORS3189 EP type number : 0 411 826 759

Governor

Governer design. : RSV650...750P4A421

: -14

Governer no. : 0 421 833 467

Cust. part No. : 864537 P09 v.05/96

Customer—spec. information Customer : PENTA Motor : TWD 710 G

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5
Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : ___.0
Tolerance bar : +- 1.0

Prestroke mm : 2.65 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 9.30 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 190.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

B22

		+	
Spreed Tolerance cm3/1000 strokes	: 5.0	CONTROL LEVER	
Check tolerance cm3/1000s.	: 9.0	position degree tolerance degree	
Rated speed rpm	: 650	control lever position degree tolerance degree	
Rack travel in mm Tolerance mm Del. quantity	: 3.40 : +- 0.10	+ RATED SPEED	
cm3/1000 strokes Tolerance cm3/1000 strokes		rack travel mm Rated speed rpm Tolerance 1/min	: 752
Check tolerance cm3/1000s. Spreed		rack travel mm Rated speed rpm	: 4.00
Tolerance cm3/1000 strokes	: 5.0	Tolerance 1/min	: +- 7
Check tolerance cm3/1000s.	: 8.0	+ rack travel mm + Tolerance mm + Rated speed rpm	: +- 0.55
(B) SETTING OF IN.	JECTION PUMP	ASSEMBLY GOVERNOR	
***************************************		+ Rated speed rpm + rack travel mm	
GUIDE SLEEVE POSI		Rated speed rpm Tolerance 1/min	
Rated speed rpm	: 800	+ rack travel mm +	
Rack travel in mm Tolerance mm		+ rack travel mm + Tolerance mm + Rated speed rpm	: 0.85 : + 0.55 : 900
governor spring pre-tension click setting x	: 4.00	Rated speed rpm rack travel mm	: 751 : 8.30
FULL LOAD DELIVERY	Y AT FULL LOAD STOP	Rated speed rpm Tolerance 1/min rack travel mm	: 777 : +- 4 : 4.00
Rated speed rpm Aneroid pressure hPa Del. quantity	: 700	rack travel mm Tolerance mm Rated speed rpm	: 0.85 : +- 0.55 : 900
cm3/1000 strokes Tolerance cm3/1000 strokes	: 190.0 : +- 1.0	Rated speed rpm rack travel mm	: 752 : 8.30
Check tolerance cm3/1000s. Spreed Tolerance	: +- 4.0	Rated speed rpm Tolerance 1/min rack travel mm	: 778 : +- 4 : 4.00
cm3/1000 strokes Check tolerance	-	rack travel mm	: 0.85
cm3/1000s.	: 9.0	Tolerance mm Rated speed rpm	: +- 0.55 : 900

		+	
Rated speed rpm rack travel mm	: 753 : 8.30		TORQUE CONTROL
Rated speed rpm Tolerance 1/min rack travel mm	: 779 : + 4 : 4.00)	Rated speed rpm rack travel mm Tolerance mm
rack travel mm Tolerance mm Rated speed rpm			
Rated speed rpm rack travel mm	: 754 : 8.30)	BREAKAWAY
Rated speed rpm Tolerance 1/min rack travel mm	: +- 4	† † †	Rack travel in mm Rated speed rpm Tolerance 1/min
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : + 0.55 : 900	+	
Rated speed rpm rack travel mm	: 755	, + +	STARTING FUEL DEL
Rated speed rpm Tolerance 1/min rack travel mm	: 781 : + 4 : 4.00	† † †	rack travel mm Tolerance mm
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : ← 0.55 : 900		LOW IDLE
LOW IDLE			Rated speed rpm Del. quantity cm3/1000 strokes Tolerance
control lever position degree tolerance degree			cm3/1000 strokes Check tolerance cm3/1000S. Spreed
control lever position degree tolerance degree	: 37.0 : +- 4.0	+	Tolerance cm3/1000 strokes Check tolerance cm3/1000S.
Testing:		1	
Rated speed rpm rack travel mm Tolerance mm	: 650 : 3.40 : + 0.10		End of test speci
rack travel mm Rated speed rpm Tolerance 1/min	: 660	+	chu or test spect
SET IDLE AUXILIAR	Y SPRING	†	
		t	

TORQUE CONTROL			
Rated speed rpm rack travel mm Tolerance mm	: : : +-	700 9.30 0.05	
BREAKAWAY			
Rack travel in mm Rated speed rpm Tolerance 1/min	: : +-	8.30 752 3	
STARTING FUEL DEL	IVERY	,	
Rated speed rpm rack travel mm Tolerance mm	: : : +-	100 20.50 0.50	
LOW IDLE			
Rated speed rpm	:	650	
Del. quantity cm3/1000 strokes	: :	650 22.0	
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes			
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed		22.0	
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.		22.0	

ification sheet

rack travel mm : 2.00

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : Test oil :

: 28.06.96 : ISO 4113

Combination No. : 0 401 876 809

Injection pump

Pump designation : PE6P12OA32ORS3355 EP type number : 0 411 826 814

Governor

Governer design. : RSV325...1200P1A605

Governer no. : 0 421 833 487

Cust. part No. : 3825834 PO5 v.05/96

Customer—spec. information Customer : PENTA Motor : TWD731ME Power KW : 175.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.45
Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 7.80 Tolerance mm : +- 0.50

Firing order : 1-5- 3- 6- 2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance $^{\circ}NW$: +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm: 10.60

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 126.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : +- 4.0	theck tolerance cm3/1000s. : 11.0
Spreed	_
Tolerance cm3/1000 strokes : 7.0	CONTROL LEVER
Check tolerance cm3/1000s. : 11.0	control lever position degree : 71.0
Data di anno di anno 1725	tolerance degree : +- 4.0
Rated speed rpm : 325	control lever position degree : 121.0
Rack travel in mm : 4.40	+ tolerance degree : +- 4.0
Tolerance mm : + 0.10	+
Del. quantity	+ RATED SPEED
cm3/1000 strokes : 24.0	The second secon
Tolerance cm3/1000 strokes : +- 2.5	+ rack travel mm : 9.60 + Rated speed rpm : 1230
Check tolerance	+ Tolerance 1/min : +- 5
cm3/1000s. : +- 5.0	Total and Thirties .
Spreed	rack travel mm : 4.00
Tolerance	+ Rated speed rpm : 1284
cm3/1000 strokes : 3.0	+ Tolerance 1/min : +- 15
Check tolerance	+
cm3/1000s. : 6.0	+ rack travel mm : 0.85
	+ Tolerance mm : +- 0.55
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1400
WITH GOVERNOR	I
MITH GOVERNOR	
	+ LOW IDLE
	+
GUIDE SLEEVE POSITION	†
Saturd arrand arrange 200	control lever
Rated speed rpm : 800	<pre>position degree : 81.0 tolerance degree : +- 4.0</pre>
Rack travel in mm : 0.85	L toterance degree . +- 4.0
Tolerance mm : +- 0.55	+ control lever
TO COT CITIES THE COURT OF THE	position degree : 31.0
governor spring	+ tolerance degree : +- 4.0
pre-tension	+
click setting x : 6.00	Setting point w/out bumper spring
	Setting point w/out bumper spring
	+
click setting x : 6.00 FULL LOAD DELIVERY AT FULL LOAD STOP	Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 3.90
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200	Setting point w/out bumper spring Rated speed rpm : 325
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure	Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 3.90 Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1500	Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 3.90 Testing: Rated speed rpm : 325
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure	Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 3.90 Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1500 Del. quantity	Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 3.90 Testing: Rated speed rpm : 325 rack travel mm : 4.40 Tolerance mm : +- 0.10
Click setting x : 6.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : +- 1.0	Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 3.90 Testing: Rated speed rpm : 325 rack travel mm : 4.40 Tolerance mm : +- 0.10 rack travel mm : 2.00
Click setting x : 6.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 3.90 Testing: Rated speed rpm : 325 rack travel mm : 4.40 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 390
Click setting x : 6.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0	Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 3.90 Testing: Rated speed rpm : 325 rack travel mm : 4.40 Tolerance mm : +- 0.10 rack travel mm : 2.00
Click setting x : 6.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed	Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 3.90 Testing: Rated speed rpm : 325 rack travel mm : 4.40 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 390
Click setting x : 6.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1200 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 126.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0	Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 3.90 Testing: Rated speed rpm : 325 rack travel mm : 4.40 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 390

Rated speed rpm rack travel mm Toleranse mm	: 1200 : 10.60 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 10.60 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	······································
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 10.60 : +- 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 7.80 : +- 0.10
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 650 : 2.50 : ← 0.15
Pressure hPa rack travel mm Tolerance mm	: 260 : 0.25 : +- 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1500 : 700
Del. quantity cm3/1000 strokes	: 147.0
Tolerance cm3/1000 strokes	: +- 3.0
Check tolerance cm3/1000s. Spreed	: +- 6.0
Tolerance cm3/1000 strokes	: 7.0
Check tolerance cm3/1000s.	: 11.0

Del. quantity cm3/1000 strokes	:	87.0
Tolerance cm3/1000 strokes Check tolerance	: +-	1.0
cm3/1000s.	: +-	4.0

BREAKAWAY

Rack travel in mm	:	9.60
Rated speed rpm	:	1230
Tolerance 1/min	:	+- 5

LOW IDLE

Rated speed rpm Del. quantity	:	325
cm3/1000 strokes Tolerance	:	24.0
cm3/1000 strokes	: +-	2.5
Check tolerance cm3/1000S. Spreed	: +-	5.0
Tolerance cm3/1000 strokes Check tolerance	:	3.0
cm3/1000s.	:	6.0

End of test specification sheet

hPa

Aneroid pressure

hPa : -Rated speed rpm : 500

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.06.96 Test oil : ISO 4113

Combination No. : 0 402 046 862

Injection pump

Pump designation : PES6P12OA32ORS3337 EP type number : 0 412 026 770

Governor

Governer design. : RQV300...1250PA1149K

Governer no. : 0 421 815 416

Cust. part No. : CCEP 5141A 66-218

Customer-spec. information

Customer : RENAULT V.I.
Motor : MIDR 06-02-26 V4

Power KW : 133.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : + 2.0

Overflow valve : 2 417 413 084

Inlet press. bar : 2.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.10 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance "NW : + 0.50

Start of delivery mark

 $^{\circ}$ NW after s.o.d. : -0.18

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

mm : 21.00 and maximum rack

travel : 10.50 Difference ° CS : 2.00

BASIC SETTING

Rated speed rpm : 1250 +	
<u> </u>	Rated speed rpm : 381 guide sleeve
Rack travel in mm: 11.10	travel mm : 2.38
Tolerance mm : + 0.05	Tolerance mm : +- 0.25
Del. quantity	Rated speed rpm : 431
cm3/1000 strokes : 150.0	guide sleeve
T . 1	travel mm : 2.98
Tolerance + 1.0 +	Tolerance mm : +- 0.25
CIID/ 1000 Strokes . 1 1.0	Rated speed rpm : 530
Check tolerance	guide sleeve
cm3/1000s. : +- 4.0	travel mm : 3.77
Canad	Tolerance mm : +- 0.25
Spreed + Tolerance +	Rated speed rpm : 1580
cm3/1000 strokes : 5.0	guide sleeve
	travel mm : 13.50
Check tolerance	Tolerance mm : +- 0.50
cm3/1000s. : 9.0 +	·
Rated speed rpm : 300	GUIDE SLEEVE POSITION
1	Rated speed rpm : 1380
Rack travel in mm: -6.30	Nated Speed Ppiii . 1300
Tolerance mm : + 0.10	Rack travel in mm : 10.50
Del. quantity +	Tolerance mm : +- 1.30
cm3/1000 strokes : 32.0	
Tolerance +	
$rm3/1000$ strokes $\cdot + 20$	FILL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : +- 2.0 +- Check tolerance +-	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : + 5.0	Rated speed rpm : 1250
Check tolerance cm3/1000s. : + 5.0 + 5.0	Rated speed rpm : 1250 Aneroid pressure
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance	Rated speed rpm : 1250 Aneroid pressure hPa : 1000
Check tolerance cm3/1000s. : + 5.0 spreed Tolerance cm3/1000 strokes : 8.0	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	Rated speed rpm : 1250 Aneroid pressure hPa : 1000
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 150.0
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20 Rated speed rpm : 1346	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER .
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20 Rated speed rpm : 1346 guide sleeve	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER . control lever position degree : 297.0
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20 Rated speed rpm : 1346 guide sleeve travel mm : 10.55	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER .
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20 Rated speed rpm : 1346 guide sleeve travel mm : 10.55 Tolerance mm : + 0.15	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER . control lever position degree : 297.0
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20 Rated speed rpm : 1346 guide sleeve travel mm : 10.55 Tolerance mm : + 0.15 Rated speed rpm : 905	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 297.0 tolerance degree : +- 4.0 RATED SPEED
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20 Rated speed rpm : 1346 guide sleeve travel mm : 10.55 Tolerance mm : + 0.15 Rated speed rpm : 905 guide sleeve	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER . control lever position degree : 297.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00
Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20 Rated speed rpm : 1346 guide sleeve travel mm : 10.55 Tolerance mm : + 0.15 Rated speed rpm : 905	Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 297.0 tolerance degree : +- 4.0 RATED SPEED

	7.40	+ Rated speed rpm : 1250
rack travel mm Rated speed rpm Tolerance 1/min	: 1395	Pressure hPa : 160 rack travel mm : -1.40 Tolerance mm : +- 0.10
rack travel mm Tolerance mm Rated speed rpm	: ← 0.50	Pressure hPa : 280 rack travel mm : -0.35 Tolerance mm : +- 0.05
LOW IDLE		START CUT-OUT
control lever position degree		Rated speed rpm : > 175 Rated speed rpm : < 240
tolerance degree Testing:	: +- 4.0	+ Check + speed 1/min : > 155 + Check
Rated speed rpm	: 300	speed 1/min : < 260
rack travel mm Tolerance mm	: -6.30	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm	: 200	Aneroid pressure hPa : 1000
CRT mm min.	: < -5.20	Rated speed rpm : 850 Del. quantity
Rated speed rpm	: 400	cm3/1000 strokes : 122.0 Tolerance
TORQUE CONTROL		- + cm3/1000 strokes : +- 3.0 + Check tolerance + cm3/1000s. : +- 6.0
Rated speed rpm	: 1250	Aneroid pressure
Rated speed rpm rack travel mm Tolerance mm	: -1.35	hPa : - Rated speed rpm : 1250 Del. quantity
	: 350 : -1.80 : + 0.20	- cm3/1000 strokes : 106.0 - Tolerance - cm3/1000 strokes : +- 1.0 - Check tolerance - cm3/1000s. : +- 4.0
ANEROID/ALTITUDE COMPENSATOR TEST		BREAKAWAY
SETTING		Rack travel in mm: -1.00 Rated speed rpm: 1315
Rated speed rpm Pressure hPa	: 1250 : 1000	Tolerance 1/min : + 15
MEASUREMENT		STARTING FUEL DELIVERY
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: -2.00	Rated speed rpm : 160 Del. quantity cm3/1000 strokes : 108.0

Tolerance cm3/1000 strokes : +- 15.0 Check tolerance cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 32.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 24.05.96 : ISO 4113

Combination No.

: 0 402 076 801

Injection pump

Pump designation : PES6P12OA1320/5RS337

: 2Y

: 0 412 026 793 EP type number

Governor

Governer design. : RSV350...1050P1A641

Governer no.

: 0 421 833 553

Cust. part No. : 1382923

Customer-spec. information

Customer

: SCANIA

Motor

: DSI1172A,-C1157A

TEST BENCH REQUIREMENTS

Inlet line

: 3.1

Vibration

damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve : 1 417 413 025

Inlet press. bar :

2.5

Tolerance bar

: +- 0.1

Test nozzle holde

assembly

: 1 688 901 104

Opening pressure

bar

251.5

Tolerance bar

: +- 1.5

CO4

Test lines : 1 680 750 008

Outside diameter :

6.0

x inside diameter :

2.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : +- 1.0

Prestroke mm 4.45

: +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

: +- 0.30 Tolerance

Check

tolerance °NW : +- 0.50

Start of delivery mark

Tolerance : + 0.30

Check

: +- 0.75tolerance °NW

Barrel no.

1

BASIC SETTING

Rated speed rpm :

700

Rack travel in mm: 16.75

Tolerance mm : + 0.05

Del. quantity	+ Check tolerance - cm3/1000S. : +- 4.0
cm3/1000 strokes : 263.0	+ Spreed + Tolerance
Tolerance cm3/1000 strokes : +- 1.0	+ cm3/1000 strokes : 8.0 + Check tolerance
Check tolerance cm3/1000s. : +- 4.0	+ cm3/1000s. : 12.0
Channel	+ CONTROL LEVER
Spreed Tolerance	+ CONTROL LEVER
cm3/1000 strokes : 8.0	+ control lever
Check tolerance	<pre>position degree : 33.0 tolerance degree : +- 4.0</pre>
cm3/1000s. : 12.0	+ total ance degree 4.0
	+ control lever
Rack travel in mm : 6.00	<pre>position degree : 83.0 tolerance degree : +- 4.0</pre>
Tolerance mm : +- 0.20	T total ance degree 4.0
Del. quantity	+
cm3/1000 strokes : 20.0 Tolerance	ASSEMBLY GOVERNOR SETTING
cm3/1000 strokes : +- 4.0	Rated speed rpm : 750
Check tolerance	rack travel mm : 15.70
cm3/1000s. : +- 6.0 Spreed	+ + Rated speed rpm : 788
Tolerance	Tolerance 1/min : + 4
cm3/1000 strokes : 5.0	rack travel mm : 4.00
Check tolerance cm3/1000s. : 9.0	+ + rack travel mm : 0.85
(11137 (0003)	+ Tolerance mm : +- 0.55
	Rated speed rpm : 850
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ + Rated speed rpm : 751
MILL GOAFWAOK	rack travel mm : 15.70
	+
GUIDE SLEEVE POSITION	+ Rated speed rpm : 789 + Tolerance 1/min : +- 4
GOIDE SEEEVE FOSTITO!	rack travel mm : 4.00
Rated speed rpm : 800	+
Rack travel in mm : 0.50	+ rack travel mm : 0.85 + Tolerance mm : +- 0.55
Tolerance mm : +- 0.20	Rated speed rpm : 850
-	Pated and man 1 752
governor spring	Rated speed rpm : 752 rack travel mm : 15.70
click setting x : 6.00	+
•	+ Rated speed rpm : 790 + Tolerance 1/min : +- 4
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Tolerance 1/min : +- 4 + rack travel mm : 4.00
-	+
Rated speed rpm : 700	+ rack travel mm : 0.85 + Tolerance mm : +- 0.55
Aneroid pressure - hPa : 1500 -	+ Tolerance mm : +- 0.55 + Rated speed rpm : 850
Del. quantity	+
cm3/1000 strokes : 263.0	+ Rated speed rpm : 753 - rack travel mm : 15.70
Tolerance - cm3/1000 strokes : + 1.0 -	T TACK CLAVEC IIIII . (2.10
	Rated speed rpm : 791

Tolerance 1/min	: +- 4
rack travel mm	: 4.00
rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 850
Rated speed rpm	: 754
rack travel mm	: 15.70
Rated speed rpm Tolerance 1/min rack travel mm	
rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 850
Rated speed rpm	: 755
rack travel mm	: 15.70
Rated speed rpm Tolerance 1/min rack travel mm	
rack travel mm	: 0.85
Tolerance mm	: +- 0.55
Rated speed rpm	: 850

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 16.75 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 16.75
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 13.50
Tolerance mm : +- 0.20

Rated speed rpm : 500

Pressure hPa : - rack travel mm : 14.30

¢06

Tolerance mm : +- 0.20

Pressure hPa : 640 rack travel mm : 16.00 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 500

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000S. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 13.50 Tolerance mm : + 0.20 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : +- 24.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 24.05.96 Test oil : ISO 4113

Combination No. : 0 402 076 802

Injection pump

Pump designation : PES6P120A1320/5RS337

: 3

EP type number : 0 412 026 794

Governor

Governer design. : RSV350...1050P8A643

Governer no. : 0 421 833 555

Cust. part No. : 1385930

Customer-spec. information Customer : SCANIA

Motor : DSI1171A,-C1156A

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damper

(RoBo diaphragm): 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : +- 0.50

Start of delivery mark

Tolerance : + 0.30

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

CO7

1	Dol quantity
Rack travel in mm : 15.35 Tolerance mm : +- 0.05	Del. quantity cm3/1000 strokes : 226.0 Tolerance
	cm3/1000 strokes : +- 1.0
Del. quantity cm3/1000 strokes : 226.0	Check tolerance cm3/1000S. : +- 4.0 Spreed
Tolerance cm3/1000 strokes : +- 1.0	Tolerance cm3/1000 strokes : 8.0
Check tolerance cm3/1000s. : + 4.0	Check tolerance cm3/1000S. : 12.0
Spreed Tolerance cm3/1000 strokes : 8.0	CONTROL LEVER
Check tolerance cm3/1000s. : 12.0	position degree : 54.0 tolerance degree : +- 4.0
Rated speed rpm : 350	control lever position degree : 104.0
<u> </u>	tolerance degree : +- 4.0
Rack travel in mm: 5.00 + Tolerance mm: + 0.10 + Del. quantity	RATED SPEED
cm3/1000 strokes : 18.0	rack travel mm : 14.30
Tolerance +	Rated speed rpm : 1095
cm3/1000 strokes : +- 3.0 +- Check tolerance	Tolerance 1/min : +- 5
cm3/1000s. : +- 6.0	rack travel mm : 4.00
Spreed	Rated speed rpm : 1205
Tolerance +	Tolerance 1/min : +- 15
cm3/1000 strokes : 4.0	rack travel mm : 0.85
Check tolerance + cm3/1000s. : 8.0 +	Tolerance mm : + 0.55
	Rated speed rpm : 1300
+	·
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	LOW IDLE
+	
CUITATE OF SELECT CONTENTS	control tours
GUIDE SLEEVE POSITION	control lever position degree : 73.0
Rated speed rpm : 800	tolerance degree : +- 4.0
Rack travel in mm : 0.50	control lever
Tolerance mm : +- 0.20 +	position degree : 23.0 tolerance degree : +- 4.0
governor spring	tolerance degree : +- 4.0
pre-tension +	Setting point w/out bumper spring
click setting x : 6.00	Pated speed rom . 750
	Rated speed rpm : 350 rack travel mm : 4.50
FULL LOAD DELIVERY AT FULL LOAD STOP	
+	Testing:
Rated speed rpm : 700 + Aneroid pressure	Rated speed rpm : 350
hPa : 1500	rack travel mm : 5.00

c08

Tolerance mm	: +- 0.70	† Aneroid pressure
rack travel mm		 hPa : -
Rated speed rpm Tolerance 1/min		+ Rated speed rpm : 500 + Del. quantity
		+ cm3/1000 strokes : 150.0
TORQUE CONTROL		
	. 700	+ Check tolerance + cm3/1000S. : +- 4.0
Rated speed rpm rack travel mm		+ cm3/1000s. : + 4.0
Tolerance mm		PDEAKANAY
Rated speed rpm	: 1050	+ BREAKAWAY
Rated speed rpm rack travel mm Tolerance mm	: 15.35	+ Rack travel in mm : 14.30
toterance man	. +- 0.10	Rated speed rpm : 1095
ANEROID/ALTITUDE		
COMPENSATOR TEST		-
		+
SETTING		+
Rated speed rpm	: 500	+ Rated speed rpm : 100 + rack travel mm : 12.00
Pressure hPa	: 1500	+ Tolerance mm : +- 0.20
rack travel mm Tolerance mm	: 15.35 : +- 0.05	+ Del. quantity + cm3/1000 strokes : 100.0
TOTEL ALICE THIS	0.05	† Tolerance
MEASUREMENT		+ cm3/1000 strokes : +- 20.0 + Check tolerance
Pressure hPa	: -	cm3/1000s. : +- 24.0
Rated speed rpm		<u>†</u>
rack travel mm Tolerance mm		-
Rated speed rpm	: 500	LOW IDLE
Kateu speeu (piii		+
Pressure hPa rack travel mm	: 510 : 13.10	+ Rated speed rpm : 350 + Del. quantity
Tolerance mm	: +- 0.20	+ cm3/1000 strokes : 18.0
Pressure hPa	: 780	+ Tolerance + cm3/1000 strokes : +- 3.0
rack travel mm	: 14.50	† Check tolerance
Tolerance mm	: +- 0.05	+ cm3/1000s. : +- 6.0 + Spreed
		+ Tolerance
FUEL DELIVERY CHA	ARACTERISTICS	cm3/1000s. : 8.0
Aneroid pressure		<u>†</u>
hPa	: 1500	+
Rated speed rpm Del. quantity	: 1050	
cm3/1000 strokes	: 209.0	+ _ , _ , _ , _ , _ , _ , _ , _ , _ , _
Tolerance cm3/1000 strokes	· +- 4 A	+ End of test specification sheet
Check tolerance		+
cm3/1000s.	: +- 6.0	+

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 01.07.96 Edition : ISO 4113 Test oil

Combination No. : 0 402 646 658

Injection pump

Pump designation : PE6P13OA72ORS7371 EP type number : 0 412 636 837

Governor

Governer design. : RQV250...900PA1215

Governer no. : 0 421 814 139

Cust. part No. : 3825482-P04 V.11/95

Customer-spec. information Customer : PENTA : TAMD 163 A Motor : 405.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 60 Tolerance l/h : + 10.0 60

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.70 Tolerance mm : + 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 7.60 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

: +- 0.30 Tolerance

Check

tolerance °NW : +- 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.20

Tolerance mm : +- 0.05

1	
Del. quantity cm3/1000 strokes : 377.0	Rated speed rpm : 650 guide sleeve travel mm : 4.40
Tolerance cm3/1000 strokes : +- 1.5	Tolerance mm : +- 0.25 Rated speed rpm : 1160
Check tolerance cm3/1000s. : +- 5.0	guide sleeve travel mm : 11.50 Tolerance mm : +- 0.50
Spreed Tolerance cm3/1000 strokes : 9.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. : 12.0	Rated speed rpm : 1030
Rated speed rpm : 250	Rack travel in mm : 11.00 Tolerance mm : +- 2.00
Rack travel in mm: 5.00 + Tolerance mm: +- 0.30 +	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 25.0 Tolerance	Rated speed rpm : 900 Aneroid pressure hPa : 1500
cm3/1000 strokes : + 3.0 + Check tolerance +	Del. quantity cm3/1000 strokes : 377.0
cm3/1000s. : + 6.0 + Spreed + Tolerance	Tolerance cm3/1000 strokes : +- 1.5 Check tolerance
cm3/1000 strokes : 5.0 + Check tolerance + cm3/1000s. : 8.0 +	cm3/1000S. : + 5.0 Spreed Tolerance
+	cm3/1000 strokes : 9.0 Check tolerance
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	cm3/1000s. : 12.0
GUIDE SLEEVE TRAVEL	CONTROL LEVER
Rated speed rpm : 250	<pre>control lever position degree : 63.0 tolerance degree : +- 4.0</pre>
Rated speed rpm : 959 + guide sleeve +	<pre>control lever position degree : 118.0 tolerance degree : +- 4.0</pre>
travel mm : 8.22 + Tolerance mm : + 0.25	RATED SPEED
Rated speed rpm : 315 guide sleeve travel mm : 1.98	rack travel mm : 12.20 Rated speed rpm : 930 Tolerance 1/min : +- 5
Tolerance mm : +- 0.25 +- Rated speed rpm : 365 +-	rack travel mm : 4.00 Rated speed rpm : 1010
guide sleeve travel mm : 2.47	Tolerance 1/min : +- 15
Tolerance mm : +- 0.25 +	rack travel mm : 0.50

Tole nce mm Rati speed rpm		+ Pressure hPa : 1000 + rack travel mm : 5.10 + Tolerance mm : +- 0.20
LOW IDLE		Pressure hPa : 240 rack travel mm : 0.25 Tolerance mm : +- 0.05
control lever position degree tolerance degree		FUEL DELIVERY CHARACTERISTICS
control lever position degree tolerance degree Testing:		Aneroid pressure hPa : 1500 Rated speed rpm : 700 Del. quantity
Rated speed rpm rack travel mm Tolerance mm		- cm3/1000 strokes : 409.0 - Tolerance - cm3/1000 strokes : +- 3.0 - Check tolerance - cm3/1000s. : +- 6.0
Rated speed rpm CRT mm min.	: 150 : > 6.50	Aneroid pressure
Rated speed rpm		Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 194.0
TORQUE CONTROL		+ Tolerance
Rated speed rom rack travel mm Tolerance mm	: 900 : 13.20 : +- 0.05	cm3/1000s. : +- 5.0
Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.20 : + 0.10	BREAKAWAY
ANEROID/ALTITUDE COMPENSATOR TEST		†
SETTING		<u> </u>
Rated speed rpm Pressure hPa rack travel mm	: 500 : 1500 : 13.20 : + 0.05	LOW IDLE Rated speed rpm : 250 Del. quantity
Tolerance mm MEASUREMENT	, +- 0.05	cm3/1000 strokes : 25.0 Tolerance
Pressure hPa Rated speed rpm rack travel mm	: 7.60	- cm3/1000 strokes : +- 3.0 - Check tolerance - cm3/1000s. : +- 6.0 - Spreed
Tolerance mm	: ← 0.20 : 500	+ Tolerance + cm3/1000 strokes : 5.0 + Check tolerance
Rated speed rpm	: 500	+ cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 28.06.96 : ISO 4113 Test oil

Combination No. : 0 402 646 673

Injection pump

Pump designation : PE6P120A320RS7412 EP type number : 0 412 626 953

Governor

Governer design. : RQV275...1000PA1300K

Governer no. : 0 421 815 527

Cust. part No. : 1315099

Customer-spec. information Customer : DAF : XF 250 M Motor Power KW : 250.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C : +- 2.0 Tolerance °C

Overflow valve : 1 417 413 000

Inlet press. bar : : +- 0.1 Tolerance bar

Overflow quantity

min. L/h : 150 Tolerance L/h : + 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

: +- 0.50 tolerance °NW

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm : 11.00 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 247.0	Rated speed rpm : 1310 guide sleeve travel mm : 13.50
Tolerance cm3/1000 strokes : +- 1.0	Tolerance mm : +- 0.50
Check tolerance cm3/1000S. : +- 4.0	GUIDE SLEEVE POSITION
Spreed	Rated speed rpm : 1181
Tolerance cm3/1000 strokes : 5.0	Rack travel in mm : 10.00 Tolerance mm : +- 1.30
Check tolerance cm3/1000s. : 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 275	Rated speed rpm : 980 Aneroid pressure hPa : 1500
Rack travel in mm : 4.40	Del. quantity
Tolerance mm : +- 0.10 Del. quantity	cm3/1000 strokes : 247.0 Tolerance
cm3/1000 strokes : 17.0 Tolerance	cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000 strokes : +- 3.0 Check tolerance	cm3/1000s. : +- 4.0 Spreed
cm3/1000s. : +- 6.0	Tolerance
Spreed	cm3/1000 strokes : 5.0
Tolerance cm3/1000 strokes : 8.0	Check tolerance cm3/1000s. : 9.0
Check tolerance : 12.0	†
(1112) (11100)	
(D) OFTITALS OF THISSTION DUMP	CONTROL LEVER
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	t - control lever
	position degree : 118.0
GUIDE SLEEVE TRAVEL	tolerance degree : +- 4.0
	RATED SPEED
Rated speed rpm : 275 guide sleeve	† † rack travel mm : 10.00
travel mm : 2.04	Rated speed rpm : 1060
Tolerance mm : + 0.20	Tolerance 1/min : +- 5
Rated speed rpm : 1072	rack travel mm : 4.00
guide sleeve - travel mm : 10.16 -	+ Rated speed rpm : 1140 + Tolerance 1/min : +- 15
travel mm : 10.16 - Tolerance mm : +- 0.15 -	+ Toterance Minnt . + (5
•	rack travel mm : 0.70
Rated speed rpm : 701 - guide sleeve	Tolerance mm : +- 0.70 Rated speed rpm : 1275
travel mm : 6.52	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Tolerance mm : +- 0.25	
Rated speed rpm : 400 - guide sleeve -	LOW IDLE
travel mm : 3.92	_
Tolerance mm : +- 0.25	control lever position degree : 70.0

tolerance degree Testing:	: +- 4.0	+ Rated speed rpm : 775 + rack travel mm : 8.00 + Tolerance mm : +- 0.10
_		+
Rated speed rpm	: 275	Rated speed rpm : 775
rack travel mm Tolerance mm	: +- 0.10	Pressure hPa : 460
Rated speed rpm		rack travel mm : 10.30 Tolerance mm : +- 0.05
CRT mm min.	: > 7.40	Pressure hPa : 250
Rated speed rpm	: 310	rack travel mm : 8.60 Tolerance mm : +- 0.10
TORQUE CONTROL		<u> </u>
Rated speed rpm	: 980	FUEL DELIVERY CHARACTERISTICS
rack travel mm Tolerance mm	: 11.00	+
Tolerance mm	: +- 0.05	+ Aneroid pressure + hPa : 1500
Rated speed rom	: 900	+ Rated speed rpm : 750
Rated speed rpm rack travel mm	: 11.15	<pre>Del. quantity</pre>
Tolerance mm	: +- 0.10	cm3/1000 strokes : 282.0 Tolerance
Rated speed rpm	• 750	+ cm3/1000 strokes : +- 2.0
rack travel mm	: 11.30	+ Check tolerance
Tolerance mm	: +- 0.10	+ cm3/1000s. : +- 5.0
.	700	+ Spreed
nack thavel mm	: 700	+ Tolerance + cm3/1000 strokes : 8.0
Rated speed rpm rack travel mm Tolerance mm	: +- 0.10	+ Check tolerance
		+ Check tolerance + cm3/1000s. : 12.0
Rated speed rpm	: 600	+
rack travel mm Tolerance mm	: 10.50	+ Aneroid pressure + hPa : -
loterance nun	: +- 0.10	Rated speed rpm : 600
Rated speed rpm	: 500	+ Del. quantity
Rated speed rpm rack travel mm	: 10.15	+ cm3/1000 strokes : 186.0
Tolerance mm	: +- 0.10	+ Tolerance
Rated speed rpm	. 1000	<pre>+ cm3/1000 strokes : +- 1.0 + Check tolerance</pre>
rack travel mm	: 11.00	cm3/1000s. : +- 4.0
Tolerance mm		+
ANEROID/ALTITUDE COMPENSATOR TEST		+ BREAKAWAY + +
		+ Rack travel in mm : 10.00
		Rated speed rpm : 1060
SETTING		+ Tolerance 1/min : +- 5
Rated speed rpm	: 775	<u> </u>
Pressure hPa		+
Pressure hPa rack travel mm	: 11.30	+
Tolerance mm	: +- 0.10	İ
MEASUREMENT		LOW IDLE
Pressure hPa	: -	Rated speed rpm : 275

c16

Del quartity		
cm3/1000 strokes	:	17.0
Tolerance		
cm3/1000 strokes	: +-	3.0
Check tolerance		
cm3/1000s.	: +-	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 25.06.96 Test oil : ISO 4113

Combination No. : 0 402 646 881

Injection pump

Pump designation : PE6P12OA72ORS7126

: -10

EP type number : 0 412 626 929

Governor

Governer design. : RQV300...900PA795-4

Governer no. : 0 421 813 888

Cust. part No. : 1120971

Customer-spec. information : SCANIA Customer

: DSC1118 Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 208.5 bar : +- 1.5 Tolerance bar

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 : +- 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

tolerance °NW : +- 0.50

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 14.15 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 235.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

: +- 4.0 cm3/1000s.

Spreed

Tolerance cm3/1000 strokes	: 6.0	+ Aneroid pressure + hPa	: -
Check tolerance	. 0.0	_ + Del. quantity cm3/1000 strokes	: 235.0
cm3/1000s.	: 9.0	Tolerance cm3/1000 strokes	: + 1.0
Rated speed rpm	: 300	Check tolerance cm3/1000s. Spreed	: +- 4.0
Rack travel in mm Tolerance mm	: 4.50 : +- 0.10	Tolerance cm3/1000 strokes	: 6.0
Del. quantity cm3/1000 strokes		Check tolerance cm3/1000s.	: 9.0
Tolerance cm3/1000 strokes			. 7.0
Spreed Tolerance	2.0	CONTROL LEVER	
cm3/1000 strokes Check tolerance	: 3.0	- control lever	
cm3/1000s.	: 6.0	position degree tolerance degree	
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	control lever position degree tolerance degree	
GUIDE SLEEVE TRAV	EL	RATED SPEED	
Rated speed rpm guide sleeve	: 300	rack travel mm Rated speed rpm Tolerance 1/min	
travel mm Tolerance mm	: 1.50 : + 0.20	+	
Rated speed rpm guide sleeve	: 945	+ rack travel mm + Rated speed rpm + Tolerance 1/min	: 4.00 : 1045 : +- 15
travel mm Tolerance mm	: 8.00 : + 0.10	rack travel mm Tolerance mm	: 0.50 : +- 0.50
Rated speed rpm guide sleeve	: 350	Rated speed rpm	: 1150
travel mm Tolerance mm	: 2.20 : +- 0.30		
Rated speed rpm	: 650	LOW IDLE	
guide sleeve travel mm	: 5.00	+ + control lever	
Tolerance mm	: +- 0.30	position degree tolerance degree	
GUIDE SLEEVE POSI	TION	control lever position degree	: 17.0
Rated speed rpm	: 970	tolerance degree	•
Rack travel in mm Tolerance mm	: 12.80 : +- 1.30	Testing:	
	Y AT FULL LOAD STOP	Rated speed rpm rack travel mm Tolerance mm	: 300 : 4.50 : +- 0.10
		+	
Rated speed rpm	: 700	+ rack travel mm	: 2.00

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Rated speed rpm Tolerance 1/min	: 360 : + 30
Rated speed rpm	: 100
CRT mm min.	: > 10.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 700 : 14.15 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 900 : 14.15 : + 0.05
FUEL DELIVERY CHAI	RACTERISTICS
Aneroid pressure	
hPa Rated speed rpm	: – : 900
Del. quantity cm3/1000 strokes	
Tolerance cm3/1000 strokes	: +- 4.0
Check tolerance cm3/1000s.	: + 6.0
BREAKAWAY	
Rack travel in mm	: 13.10
Rated speed rpm Tolerance 1/min	: 945 : +- 5
STARTING FUEL DELI	IVERY
Rated speed rpm Tolerance mm	: 100 : +- 0.10
Del. quantity cm3/1000 strokes	
Tolerance cm3/1000 strokes	

Del. quantity cm3/1000 strokes : 17.0 Tolerance cm3/1000 strokes : +- 2.0 Spreed Tolerance cm3/1000 strokes : 3.0 Check tolerance cm3/1000s. : 6.0

End of test specification sheet

LOW IDLE

Rated speed rpm : 300

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

: 27.06.96 : ISO 4113 Test oil

Combination No. : 0 402 648 789

Injection pump

Pump designation : PE8P120A320LS7873 EP type number : 0 412 628 880

Governor

Governer design. : RQV300...1050PA1259

: 0 421 814 169 Governer no.

Cust. part No. : 04222488KY0165-17

Customer-spec. information

Customer : KHD

: BF8M1015/C Motor

Power KW : 400.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : : +- 0.1 Tolerance bar

Overflow quantity

min. L/h : 115 Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter :

 \times length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.05
Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-8-7-2-6 : - 5- 4- 3

: 0-45-90-135-180 Phasing : -225-270-315

: +- 0.30 Tolerance

Check

: +- 0.50 tolerance °NW

Start of delivery mark

Tolerance : +- 0.50

Check

: +- 0.75 tolerance °NW

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 14.00

Tolerance mm : +- 0.05

	1
Del. quantity cm3/1000 strokes : 340.0	Rated speed rpm : 1154 guide sleeve travel mm : 12.00
Tolerance cm3/1000 strokes : + 1.0	Tolerance mm : +- 0.25 Rated speed rpm : 1230
Check tolerance cm3/1000s. : +- 4.0	guide sleeve travel mm : 13.50 Tolerance mm : + 0.50
Spreed Tolerance cm3/1000 strokes : 6.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 1125
Rated speed rpm : 300	Rack travel in mm : 13.00 Tolerance mm : +- 1.50
Rack travel in mm : 4.80 Tolerance mm : +- 0.10	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 23.0 Tolerance	Rated speed rpm : 1050 Aneroid pressure hPa : 1600
cm3/1000 strokes : +- 3.0 Check tolerance	Del. quantity cm3/1000 strokes : 340.0
cm3/1000s. : +- 6.0 Spreed Tolerance	+ Tolerance + cm3/1000 strokes : +- 1.0 + Check tolerance
cm3/1000 strokes : 8.0 Check tolerance	- cm3/1000s. : +- 4.0 - Spreed - Tolerance
	cm3/1000 strokes : 6.0 Check tolerance
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
GUIDE SLEEVE TRAVEL	CONTROL LEVER
Rated speed rpm : 300 guide sleeve travel mm : 1.24 Tolerance mm : +- 0.20	control lever position degree : 119.0 tolerance degree : +- 4.0 RATED SPEED
Rated speed rpm : 1103 guide sleeve	rack travel mm : 13.00
travel mm : 10.19 Tolerance mm : +- 0.15	Rated speed rpm : 1090 Tolerance 1/min : +- 5
Rated speed rpm : 860 guide sleeve travel mm : 5.59	rack travel mm : 4.00 Rated speed rpm : 1140 Tolerance 1/min : +- 15
Tolerance mm: : +- 0.25 Rated speed rpm: 560	rack travel mm : 0.50 Tolerance mm : + 0.50
guide sleeve travel mm : 3.24 Tolerance mm : + 0.25	Rated speed rpm : 1300

LOW IDLE

control lever
position degree : 71.0
tolerance degree : + 4.0

Testing:

Rated speed rpm : 300 rack travel mm : 4.80 Tolerance mm : +- 0.10

Rated speed rpm : 200

CRT mm min. :> 6.30

Rated speed rpm : 345

TORQUE CONTROL

Rated speed rpm : 1050 rack travel mm : 14.00 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 400
Pressure hPa : 1600
rack travel mm : 14.00
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 400
rack travel mm : 9.00
Tolerance mm : +- 0.20

Rated speed rpm : 400

Pressure hPa : 570 rack travel mm : 10.50 Tolerance mm : +- 0.10

Pressure hPa : 1100 rack travel mm : 13.00 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 400

Del. quantity

cm3/1000 strokes : 250.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm : 13.00
Rated speed rpm : 1090
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 9.00 Tolerance mm : +- 0.30 Del. quantity cm3/1000 strokes : 150.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 24.0

LOW IDLE

300 Rated speed rpm : Del. quantity cm3/1000 strokes : 23.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance 6.0 cm3/1000s. : +-Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance 12.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 28.06.96 : ISO 4113

Combination No.

: 0 402 648 798

Injection pump

Pump designation : PE8P120A320LS7830 EP type number : 0 412 628 844

Governor

Governer design. : RQV350...1000PA1234

Governer no.

: 0 421 814 153

Cust. part No. : 0230746502

Customer-spec. information : MTU Customer

: 8v 183-02 Motor

Power KW

: 365.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 1.5
Tolerance bar : +- 0.1

Overflow quantity

min. L/h min. l/h : 85 Tolerance l/h : +- 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 4.45 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 20.25 Tolerance mm : \leftarrow 0.75

Firing order : 8-7-2-6-3 : - 5- 4- 1

: 0-45-90-135-180 Phasing

: -225-270-315

Tolerance Check

: +- 0.30

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 13.00

: +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 237.0

Tolerance	+ Tolerance mm : +- 0.25
cm3/1000 strokes : +- 1.0	+ + Rated speed rpm : 570
Check tolerance	+ guide sleeve
cm3/1000s. : +- 4.0	† travel mm : 3.45
(1000)	+ Tolerance mm : +- 0.25
Spreed	T local differential
Tolerance	Rated speed rpm : 1241
cm3/1000 strokes : 6.0	+ guide sleeve
	+ travel mm : 10.00
Check tolerance	† Tolerance mm : +- 0.25
cm3/1000s. : 9.0	+
	+ Rated speed rpm : 1330
Rated speed rpm : 350	+ guide sleeve
, , , , , , , , , , , , , , , , , , , ,	+ travel mm : 11.50
	+ Tolerance mm : +- 0.50
Rack travel in mm : 5.00	The state of the s
Tolerance mm : +- 0.10	
	GUIDE SLEEVE POSITION
Del. quantity	T GOIDE SEEENE LOSTITON
cm3/1000 strokes : 20.0	1220
Tolerance	+ Rated speed rpm : 1220
cm3/1000 strokes : +- 3.0	_
Check tolerance	+ Rack travel in mm : 12.00
cm3/1000s. : +- 6.0	+ Tolerance mm : +- 1.30
Spreed	+
Tolerance	
cm3/1000 strokes : 6.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	1
cm3/1000s. : 10.0	Rated speed rpm : 1000
(115) 10000:	+ Aneroid pressure
(D) SETTING OF INJECTION DUMD	+ hPa : 2000
(B) SETTING OF INJECTION PUMP	hPa : 2000 + Del. quantity
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0
	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance
WITH GOVERNOR	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +- 1.0
	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0
WITH GOVERNOR	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : +- 0.20	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : +- 0.20 Rated speed rpm : 1055	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : +- 0.20 Rated speed rpm : 1055 guide sleeve	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : +- 0.20 Rated speed rpm : 1055 guide sleeve travel mm : 6.50	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : +- 0.20 Rated speed rpm : 1055 guide sleeve	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : +- 0.20 Rated speed rpm : 1055 guide sleeve travel mm : 6.50 Tolerance mm : +- 0.15	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : +- 0.20 Rated speed rpm : 1055 guide sleeve travel mm : 6.50 Tolerance mm : +- 0.15 Rated speed rpm : 870	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : +- 0.20 Rated speed rpm : 1055 guide sleeve travel mm : 6.50 Tolerance mm : +- 0.15 Rated speed rpm : 870 guide sleeve	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 109.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : +- 0.20 Rated speed rpm : 1055 guide sleeve travel mm : 6.50 Tolerance mm : +- 0.15 Rated speed rpm : 870 guide sleeve travel mm : 4.94	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : +- 0.20 Rated speed rpm : 1055 guide sleeve travel mm : 6.50 Tolerance mm : +- 0.15 Rated speed rpm : 870 guide sleeve	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 109.0 tolerance degree : + 4.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : +- 0.20 Rated speed rpm : 1055 guide sleeve travel mm : 6.50 Tolerance mm : +- 0.15 Rated speed rpm : 870 guide sleeve travel mm : 4.94 Tolerance mm : +- 0.25	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 109.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : +- 0.20 Rated speed rpm : 1055 guide sleeve travel mm : 6.50 Tolerance mm : +- 0.15 Rated speed rpm : 870 guide sleeve travel mm : 4.94 Tolerance mm : +- 0.25 Rated speed rpm : 404	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 109.0 tolerance degree : +- 4.0 RATED SPEED
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : +- 0.20 Rated speed rpm : 1055 guide sleeve travel mm : 6.50 Tolerance mm : +- 0.15 Rated speed rpm : 870 guide sleeve travel mm : 4.94 Tolerance mm : +- 0.25 Rated speed rpm : 404 guide sleeve	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 109.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 12.00
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : +- 0.20 Rated speed rpm : 1055 guide sleeve travel mm : 6.50 Tolerance mm : +- 0.15 Rated speed rpm : 870 guide sleeve travel mm : 4.94 Tolerance mm : +- 0.25 Rated speed rpm : 404 guide sleeve travel mm : 2.52	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 109.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1045
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : +- 0.20 Rated speed rpm : 1055 guide sleeve travel mm : 6.50 Tolerance mm : +- 0.15 Rated speed rpm : 870 guide sleeve travel mm : 4.94 Tolerance mm : +- 0.25 Rated speed rpm : 404 guide sleeve	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 109.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 12.00
GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.20 Rated speed rpm : 1055 guide sleeve travel mm : 6.50 Tolerance mm : + 0.15 Rated speed rpm : 870 guide sleeve travel mm : 4.94 Tolerance mm : + 0.25 Rated speed rpm : 404 guide sleeve travel mm : 2.52	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 109.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1045
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : +- 0.20 Rated speed rpm : 1055 guide sleeve travel mm : 6.50 Tolerance mm : +- 0.15 Rated speed rpm : 870 guide sleeve travel mm : 4.94 Tolerance mm : +- 0.25 Rated speed rpm : 404 guide sleeve travel mm : 2.52 Tolerance mm : +- 0.25	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 109.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1045 Tolerance 1/min : + 5
GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.20 Rated speed rpm : 1055 guide sleeve travel mm : 6.50 Tolerance mm : + 0.15 Rated speed rpm : 870 guide sleeve travel mm : 4.94 Tolerance mm : + 0.25 Rated speed rpm : 404 guide sleeve travel mm : 2.52 Tolerance mm : + 0.25 Rated speed rpm : 404 guide sleeve travel mm : 2.52 Tolerance mm : + 0.25	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 109.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1045 Tolerance 1/min : + 5 rack travel mm : 4.00
GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.20 Rated speed rpm : 1055 guide sleeve travel mm : 6.50 Tolerance mm : + 0.15 Rated speed rpm : 870 guide sleeve travel mm : 4.94 Tolerance mm : + 0.25 Rated speed rpm : 404 guide sleeve travel mm : 2.52 Tolerance mm : + 0.25 Rated speed rpm : 404 guide sleeve travel mm : 2.52 Tolerance mm : + 0.25	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 109.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1045 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1150
GUIDE SLEEVE TRAVEL Rated speed rpm : 350 guide sleeve travel mm : 1.53 Tolerance mm : + 0.20 Rated speed rpm : 1055 guide sleeve travel mm : 6.50 Tolerance mm : + 0.15 Rated speed rpm : 870 guide sleeve travel mm : 4.94 Tolerance mm : + 0.25 Rated speed rpm : 404 guide sleeve travel mm : 2.52 Tolerance mm : + 0.25 Rated speed rpm : 404 guide sleeve travel mm : 2.52 Tolerance mm : + 0.25	hPa : 2000 Del. quantity cm3/1000 strokes : 237.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 109.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1045 Tolerance 1/min : + 5 rack travel mm : 4.00

rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1250
LOW IDLE	
control lever position degree tolerance degree	: 66.0 : +- 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 5.00 : + 0.10
Rated speed rpm	: 250
CRT mm min.	: > 6.70
Rated speed rpm	: 400
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 13.00 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 13.00 : +- 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 2000 : 13.00 : +- 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 7.00 : +- 0.15
Rated speed rpm	: 500
Pressure hPa rack travel mm	: 400 : 8.45
c26	

Tolerance mm	: +- 0.05
Pressure hPa	: 1000
rack travel mm	: 11.40 : +- 0.15
Tolerance mm	: +- 0.15
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 280 : < 290
	. \ 270
Check speed 1/min	: > 260
Check	. > 200
speed 1/min	: < 310
FUEL DELIVERY CHA	DACTEDISTICS
	RACIERISTICS
Aneroid pressure hPa	: 2000
Rated speed rpm	
Del. quantity	
cm3/1000 strokes Tolerance	: 238.0
cm3/1000 strokes	: +- 3.0
Check tolerance	
cm3/1000s.	: +- 6.0
Aneroid pressure	
hPa	: - : 500
Rated speed rpm Del. quantity	. 500
cm3/1000 strokes	: 92.0
Tolerance	
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s.	: +- 4.0
BREAKAWAY	
Book though to mm	. 12 00
Rack travel in mm Rated speed rpm	: 1045
Rated speed rpm Tolerance 1/min	: +- 5
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
Del. quantity cm3/1000 strokes	: 230.0
Tolerance	
cm3/1000 strokes Check tolerance	: +- 15.0
cm3/1000s.	: +- 19.0

LOW IDLE

350 Rated speed rpm : Del. quantity 20.0 cm3/1000 strokes : Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 24.06.96 : ISO 4113 Test oil

Combination No. : 0 402 678 812

Injection pump

Pump designation : PE8P12OA32OLS7801-2

EP type number : 0 412 628 825

Governor

Governer design. : RSV350...1050P0A535

: -2

Governer no. : 0 421 833 318

Cust. part No. :

Customer-spec. information Customer : MB-NFZ Motor : OM442A Power KW : 260.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

40 temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 110 Tolerance l/h : +- 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 2.5

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Firing order : 8-7-2-6-3

: - 5- 4- 1

: 0-45-90-135-180 Phasing

: -225-270-315 : +- 0.30

Tolerance

Check

tolerance °NW : +- 0.50

BASIC SETTING

Rated speed rpm : 1030

Rack travel in mm : 12.85 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 180.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

: +- 4.0 cm3/1000s.

Spreed

Tolerance cm3/1000 strokes	: 5.0	tolerance degree	: +- 4.0
		_ RATED SPEED	
Check tolerance cm3/1000s.	: 9.0	† rack travel mm	: 11.80
uiis/ luuus.	: 9.0	Rated speed rpm	: 1075
Rated speed rpm	: 350	Tolerance 1/min	
ated speed rpill	. 550	I rocerance mini	, 1
		+ rack travel mm	: 4.00
Rack travel in mm	: 5.70	+ Rated speed rpm	: 1145
	: +- 0.10	+ Tolerance 1/min	
el. quantity		+	
m3/1000 strokes	: 18.0	+ rack travel mm	: 0.85
olerance		+ Tolerance mm	: +- 0.55
m3/1000 strokes	: +- 3.0	+ Rated speed rpm	: 1400
heck tolerance		+	
	: +- 6.0	+	
preed		101.751	
olerance		+ LOW IDLE	
m3/1000 strokes	: 8.0	†	
Check tolerance	: 12.0	t control lever	
cm3/1000s.	. 12.0	- position degree	: 67.0
		tolerance degree	
B) SETTING OF INJE	FCTION PUMP	toterance degree	• • ••0
ITH GOVERNOR	2012011 TOTAL	Testing:	
		T Pated speed rom	: 350
		Rated speed rpm rack travel mm	: 5.70
UIDE SLEEVE POSITI	TON	+ Tolerance mm	: +- 0.10
OTAE SPEEKE LASTII	TO!4	T TOTEL ALICE IIII	0.10
Rated speed rpm :	: 800	+ rack travel mm	: 2.00
······································		+ Rated speed rpm	
Rack travel in mm :	: 0.50	+ Tolerance 1/min	
olerance mm :	: +- 0.20	+	
		Rated speed rpm	: 100
FULL LOAD DELIVERY	AT FULL LOAD STOP	CRT mm min.	: > 19.50
Pated speed nom	: 1030	SET IDLE AUXILIAR	Y SPRING
Rated speed rpm : Aneroid pressure	. 1030	I SEL TOLE MOVILLAR	I DEKTING
hPa :	: 1100	Rated speed rpm	: 100
el. quantity	. 1100	Added opeca i piii	, ,,,,,
cm3/1000 strokes :	: 180.0	ļ	
Tolerance		TORQUE CONTROL	
	: +- 1.0	+	
Check tolerance		+ Rated speed rpm	: 1030
	: +- 4.0	+ rack travel mm	: 12.85
preed		+ Tolerance mm	: +- 0.05
olerance		+	
m3/1000 strokes :	5.0	+ Rated speed rpm	
heck tolerance		† rack travel mm	: 14.50
n3/1000s. :	9.0	† Tolerance mm	: 0.10
		†	252
		+ Rated speed rpm	: 950
ANTRAL A TITT		+ rack travel mm	: 13.20
ONTROL LEVER		† Tolerance mm	: +- 0.10
		T Pated aread non	: 830
ontrol lever	90.0	+ Rated speed rpm + rack travel mm	
osition degree :	70.0	T Tack Claver mill	. 13.70

D01

Tolerance mm	: +- 0.10	
ANEROID/ALTITUDE COMPENSATOR TEST		
MEASUREMENT		
Pressure hPa Rated speed rpm	: – : 500	
Pressure hPa rack travel mm Tolerance mm	: 420 : 0.80 : +- 0.05	
Pressure hPa rack travel mm Tolerance mm	: 600 : 2.40 : + 0.10	
FUEL DELIVERY CHA		
hPa Rated speed rpm	: 1100 : 700	
Del. quantity cm3/1000 strokes	: 212.0	
Tolerance		
cm3/1000 strokes Check tolerance	: +- 2.0	
cm3/1000S. Spreed	: +- 5.0	
Tolerance cm3/1000 strokes	: 8.0	
Check tolerance cm3/1000S.	: 12.0	
	. 12.0	
Aneroid pressure hPa	• –	
Rated speed rpm	500	
Del. quantity cm3/1000 strokes	: 140.0	
Tolerance		
cm3/1000 strokes Check tolerance	: +- 1.0	
cm3/1000s.	: +- 4.0	
Spreed Tolerance		
cm3/1000 strokes	: 8.0	
Check tolerance	: 12.0	
cm3/1000S.		

Rack travel in mm Rated speed rpm Tolerance 1/min	:	11.80 1075 +- 5

STARTING FUEL DELI	VERY	
Rated speed rpm Del. quantity	:	100
cm3/1000 strokes	:	190.0
	: +-	10.0
Check tolerance cm3/1000s.	: +	14.0

LOW IDLE	
Rated speed rpm Del. quantity	: 350
cm3/1000 strokes	: 18.0
Tolerance cm3/1000 strokes	: +- 3.0
Check tolerance cm3/1000s.	: +- 6.0
Spreed Tolerance	
cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 26,06.96 : ISO 4113

Combination No. : 0 402 678 831

Injection pump

Pump designation : PE8P12OA320LS7901 EP type number : 0 412 628 918

Governor

Governer design. : RSV350...1050P0A651

Governer no. : 0 412 833 568

Cust. part No. : 0270745602

Customer-spec. information Customer : MB-NFZ : 0M442LA Motor Power KW : 297.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5 Tolerance bar : +- 0.1

Tolerance l/h: + 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter :

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.50 Tolerance mm : +- 0.50

Firing order : 8-7-2-6-3 : - 5- 4- 1

: 0-45-90-135-180 Phasing : -225-270-315

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.50

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 13.80 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 213.0

Tolerance

cm3/1000 strokes : + 1.5

Check tolerance

: +- 4.5 cm3/1000s.

D03

	+		
Spreed	+	control lever	
Tolerance	+	position degree	: 89.0
cm3/1000 strokes :	5.0	_	
	+	RATED SPEED	
Check tolerance	+		40.00
cm3/1000s. :	9.0	rack travel mm	
	750	Rated speed rpm	
Rated speed rpm :	350 +	Tolerance 1/min	: +- 5
	†	rack travel mm	: 4.00
Rack travel in mm :	5.70	Rated speed rpm	
Tolerance mm :		Tolerance 1/min	
Del. quantity	I	rocerance minim	• 10
cm3/1000 strokes :	19.0	rack travel mm	: 0.85
Tolerance	1	Tolerance mm	
cm3/1000 strokes :	+- 3.0	Rated speed rpm	
Check tolerance	1	(pin	
	+ 6.0		
Spreed	<u> </u>		
Tolerance	+	LOW IDLE	
cm3/1000 strokes :	8.0		
Check tolerance	+		
cm3/1000s. :	12.0	control lever	
	+	position degree	: 67.0
	· †		
(B) SETTING OF INJE	CTION PUMP +	Testing:	
WITH GOVERNOR	†	5 . 14	350
	†	Rated speed rpm	
	Ţ	rack travel mm	
GUIDE SLEEVE POSITION	ON	Tolerance mm	: +- 0.10
GOIDE SCEEVE POSITIO	I	rack travel mm	: 2.00
Rated speed rpm :	800	Rated speed rpm	
Nateu speed (piii .	1	Tolerance 1/min	
Rack travel in mm :	0.50	roceranoe mini	
Tolerance mm :		Rated speed rpm	: 100
TO CO, GITTO TIME	+	· · · · · · · · · · · · · · · · · · ·	
		CRT mm min.	: > 19.50
FULL LOAD DELIVERY	AT FULL LOAD STOP +		
	1050	SET IDLE AUXILIA	RY SPRING
Rated speed rpm :	1050	pool Americal	. 2.00
Aneroid pressure	1200	rack travel mm	: 2.00
	1200		
Del. quantity cm3/1000 strokes :	213.0	TORQUE CONTROL	
Tolerance	213.0	TORMUE CONTROL	
cm3/1000 strokes :	+- 15 I	Rated speed rpm	: 1050
Check tolerance	I	rack travel mm	
	+ 4.5	Tolerance mm	: +- 0.05
Spreed .	1	, 5 251 51 100 11111	
Tolerance	1	Rated speed rpm	: 600
cm3/1000 strokes :	5.0	rack travel mm	
Check tolerance	1	Tolerance mm	
cm3/1000s. :	9.0	· · · · · · · · · · · · · · · · · · ·	
	1	Rated speed rpm	: 860
	1	rack travel mm	: 14.00
	 ‡	Tolerance mm	: +- 0.05
CONTROL LEVER	+		
	1		

ANEROID/ALTITUDE COMPENSATOR TEST

MEASUREMENT

Pressure hPa 500 Rated speed rpm

Pressure hPa 250 rack travel mm 0.35 : +- 0.05 Tolerance mm

800 Pressure hPa 2.40 rack travel mm Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1200 hPa Rated speed rpm 600

Del. quantity

cm3/1000 strokes : 221.0

Tolerance

cm3/1000 strokes : +-1.5

Check tolerance

cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

Aneroid pressure

hPa 500 Rated speed rpm Del. quantity cm3/1000 strokes :

143.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 8.0

BREAKAWAY

12.80 Rack travel in mm : Rated speed rpm : 1075 Tolerance 1/min : +-

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity

cm3/1000 strokes : 250.0

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm 350 Del. quantity 19.0 cm3/1000 strokes :

Tolerance

3.0 cm3/1000 strokes : +-

Check tolerance

cm3/1000s. 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

End of test specification sheet

005

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 01.07.96 Test oil : ISO 4113

Combination No. : 0 402 744 801

Injection pump

Pump designation : PES4P120A320RS7380

EP type number : 0 412 724 802

Governor

Governer design. : RQV275...1200PA1232K

Governer no. : 0 421 815 469

Cust. part No. : CCEP 5149B 66-237

Customer-spec. information

Customer : RENAULT V.I.

: MIDR 04-02-26 B4 Motor

: 110.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 071

Inlet press. bar : 2.5

Overflow quantity

min. l/h : 95 Tolerance l/h : +- 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.00 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 11.00 Tolerance mm : + 0.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

: + 0.30 Tolerance

Check

tolerance °NW : +- 0.50

Start of delivery mark

 $^{\circ}$ NW after s.o.d. : -0.30

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

21.00

and maximum rack

11.00 travel Difference ° CS : 1.50

	+ Rated speed rpm : 894
BASIC SETTING	- + guide sleeve - + travel mm : 6.60
	Tolerance mm : +- 0.25
Rated speed rpm : 1200	Rated speed rpm : 560
Rack travel in mm : 12.70	<pre># guide sleeve # travel mm : 4.01</pre>
Tolerance mm : + 0.05	Tolerance mm : + 0.25
Del. quantity	Rated speed rpm : 1650
cm3/1000 strokes : 236.0	+ guide sleeve + travel mm : 13.50
Tolerance cm3/1000 strokes : +- 1.0	Tolerance mm : + 0.50
Check tolerance	GUIDE SLEEVE POSITION
cm3/1000s. : +- 4.0	+ Rated speed rpm : 1482
Spreed Tolerance	+ Rack travel in mm : 11.70
cm3/1000 strokes : 5.0	Tolerance mm : +- 1.30
Check tolerance	
cm3/1000S. : 9.0	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 325	Rated speed rpm : 1200 Aneroid pressure
	+ hPa : 1200
Rack travel in mm : -6.60 Tolerance mm : + 0.10	+ Del. quantity + cm3/1000 strokes : 236.0
Tolerance mm : +- 0.10 Del. quantity	+ Tolerance
cm3/1000 strokes : 40.0	+ cm3/1000 strokes : +- 1.0
Tolerance	+ Check tolerance
cm3/1000 strokes : + 2.0	+ cm3/1000s. : +- 4.0
Check tolerance cm3/1000s. : +- 6.0	+ Spreed + Tolerance
Spreed	cm3/1000 strokes : 5.0
Tolerance	- Check tolerance
cm3/1000 strokes : 8.0	+ cm3/1000s. : 9.0
Check tolerance	†
cm3/1000s. : 12.0	Ţ
	CONTROL LEVER
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	+ control lever
	<pre>position degree : 296.0 tolerance degree : +- 4.0</pre>
GUIDE SLEEVE TRAVEL	+ toterance degree . + 4.0
The state of the s	+ RATED SPEED
Rated speed rpm : 325	†
guide steeve	+ rack travel mm : -1.00 + Rated speed rpm : 1280
travel mm : 1.52	+ Rated speed rpm : 1280 + Tolerance 1/min : + 15
Tolerance mm : +- 0.20	+ locerance i/min : + 15
Rated speed rpm : 1272	∔ rack travel mm : -8.70
guide sleeve	+ Rated speed rpm : 1420
travel mm : 9.31	Tolerance 1/min : +- 5
Tolerance mm : +- 0.15	+ rack travel mm : -12.20
	1 contraction in the sec

Tolerance mm Rated speed rpm		+ Pressure hPa : 320 + rack travel mm : -2.75 Tolerance mm : + 0.05
LOW IDLE		START CUT-OUT
control lever position degree tolerance degree		Rated speed rpm : > 155 Rated speed rpm : < 260 Check speed 1/min : > 135
Testing:		+ Check + speed 1/min : < 270
Rated speed rpm rack travel mm Tolerance mm	: -6.60	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm	: 200	Aneroid pressure
CRT mm min.	: < -4.60	+ hPa : 1200 + Rated speed rpm : 700
Rated speed rpm	: 390	Del. quantity cm3/1000 strokes : 237.0 Tolerance
TORQUE CONTROL		cm3/1000 strokes : +- 3.0 Check tolerance
Rated speed rpm	: 1200	+ cm3/1000s. : + 6.0
Rated speed rpm rack travel mm Tolerance mm	: -1.15	<pre>+ Aneroid pressure + hPa : - + Rated speed rpm : 500 + Del. quantity + cm3/1000 strokes : 159.0</pre>
Rated speed rpm rack travel mm Tolerance mm	: 350 : -2.90 : +- 0.20	+ Tolerance + cm3/1000 strokes : + 1.0 - Check tolerance - cm3/1000S. : + 4.0
ANEROID/ALTITUDE COMPENSATOR TEST		BREAKAWAY
SETTING		+ Rack travel in mm : -1.00 + Rated speed rpm : 1280
Rated speed rpm Pressure hPa		Tolerance 1/min : +- 15
MEASUREMENT		T
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : -4.00 : +- 0.20	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 90.0
Rated speed rpm	: 500	+ Tolerance - cm3/1000 strokes : + 15.0
Pressure hPa rack travel mm Tolerance mm	: 200 : -3.40 : +- 0.20	- Check tolerance - cm3/1000S. : +- 19.0

LOW IDLE

325 Rated speed rpm : Del. quantity cm3/1000 strokes : 40.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance 8.0 cm3/1000 strokes : Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.06.96 Test oil : ISO 4113

Combination No. : 0 402 746 602

Injection pump

Pump designation : PES6P120A320RS7359

: -1

EP type number : 0 412 726 949

Governor

Governer design. : RQ275/1050PA1217-1 Governer no. : 0 421 801 798

overner no. : U 421 oui 790

Cust. part No. : CCEP 5152A 66-229

Customer-spec. information

Customer : RENAULT V.I.
Motor : MIDRO62045 R41

Power KW : 223.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.70 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 20.25

Tolerance mm : + 0.75

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

°NW after s.o.d. : -0.45

Tolerance : +- 0.50 Check

CHECK

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 13.30 Tolerance mm : +- 0.05

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 281.0	+ Rated speed rpm : 480 + guide sleeve + travel mm : 6.00
Tolerance cm3/1000 strokes : + 1.0	Tolerance mm : + 0.10
Check tolerance	Rated speed rpm : 1330 guide sleeve
cm3/1000s. : +- 4.0	travel mm : 11.50 Tolerance mm : + 0.50
Spreed	+
Tolerance cm3/1000 strokes : 5.0	GUIDE SLEEVE POSITION
Check tolerance	Rated speed rpm : 600
cm3/1000s. : 9.0	Rack travel in mm: 20.00
Rated speed rpm : 300	+ Tolerance mm : + 0.80
Rack travel in mm : -7.30	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : + 0.10	+
Del. quantity cm3/1000 strokes : 25.0	+ Rated speed rpm : 600 + Aneroid pressure
Tolerance	hPa : 1000
cm3/1000 strokes : +- 2.0	+ Del. quantity
Check tolerance	+ cm3/1000 strokes : 281.0
cm3/1000s. : +- 5.0	+ Tolerance
Spreed	+ cm3/1000 strokes : + 1.0
Tolerance cm3/1000 strokes : 8.0	+ Check tolerance + cm3/1000s. : + 4.0
cm3/1000 strokes : 8.0 Check tolerance	+ Spreed + 4.0
cm3/1000s. : 12.0	+ Tolerance
	+ cm3/1000 strokes : 5.0
	+ Check tolerance
(B) SETTING OF INJECTION PUMP	+ cm3/1000s. : 9.0
WITH GOVERNOR	‡
GUIDE SLEEVE TRAVEL	CONTROL LEVER
Rated speed rpm : 300	+ control lever
guide sleeve	position degree : 276.0
travel mm : 2.19	tolerance degree : + 4.0
Tolerance mm : +- 0.20	+ RATED SPEED
Rated speed rpm : 1122	+ RATED SPEED
guide sleeve	+ rack travel mm : -1.00
travel mm : 6.36	+ Rated speed rpm : 1115
Tolerance mm : +- 0.15	Tolerance 1/min : +- 15
Rated speed rpm : 1050	→ rack travel mm : -9.30
guide sleeve	+ Rated speed rpm : 1240
travel mm : 6.00	+ Tolerance 1/min : +- 5
Tolerance mm : +- 0.10	+ rack travel mm : -12.80
Rated speed rpm : 408	+ Tolerance mm : +- 0.50
guide sleeve	+ Rated speed rpm : 1350
travel mm : 5.26	t
Tolerance mm : +- 0.10	Ī
	T

LOW IDLE

control lever

position degree : 255.0 tolerance degree : +- 4.0

Testing:

Rated speed rpm : 300 -7.30rack travel mm : +- 0.10 Tolerance mm

rack travel mm : -11.30 : 395 Rated speed rpm Tolerance 1/min : +- 20

Rated speed rpm 200

CRT mm min. : > -4.60

TORQUE CONTROL

600 Rated speed rpm : Tolerance mm : +- 0.05

Rated speed rpm : 1050 : +- 0.10 Tolerance mm

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

500 Rated speed rpm : 1000 Pressure hPa

MEASUREMENT

Pressure hPa 500 Rated speed rpm -2.35rack travel mm : **←** 0.20 Tolerance mm

500 Rated speed rpm :

400 Pressure hPa -0.60rack travel mm : +- 0.15 Tolerance mm

Pressure hPa 240 -1.55 rack travel mm : +- 0.05 Tolerance mm

START CUT-OUT

100 Rated speed rpm :> Rated speed rpm : < 195

Check

speed 1/min : > 80 Check

215 speed 1/min : <

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1000 Rated speed rpm : 1050 Del. quantity

cm3/1000 strokes : 289.5

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

500 Rated speed rpm Del. quantity

cm3/1000 strokes : 174.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s.: +- 4.0

BREAKAWAY

Rack travel in mm : −1.00 Rated speed rpm : 1115 Tolerance 1/min : +- 15

STARTING FUEL DELIVERY

100 Rated speed rpm : Del. quantity cm3/1000 strokes : 145.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance : +- 19.0

LOW IDLE

cm3/1000s.

Rated speed rpm	:		300
Del. quantity cm3/1000 strokes	:		25.0
Tolerance			
cm3/1000 strokes	:	+-	2.0
Check tolerance			
cm3/1000s.	:	+-	5.0
Spreed			
Tolerance cm3/1000 strokes			8.0
Check tolerance	•		0.0
cm3/1000s.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 04.06.96 : ISO 4113

Combination No. : 0 402 746 604

Injection pump

Pump designation : PES6P120A720RS7366 EP type number : 0 412 726 933

Governor

Governer design. : RQV275...1100PA1208

: -1K

Governer no. : 0 421 815 492

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE

Motor

: 8460.41c-3000

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C 40

Tolerance °C : +- 2.0

Overflow valve : 2 417 413 076

Inlet press. bar :

Tolerance bar : +- 0.1

Overflow quantity

: 160 min. L/h

Tolerance l/h : +- 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar

Tolerance bar : +- 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0

x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

26.0 Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 2.85

: +- 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm : 20.50 Tolerance mm : +- 0.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

: +- 0.30 Tolerance

Check

tolerance *NW : +- 0.50

Start of delivery mark

Check

tolerance °NW : +- 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 11.40

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 203.0	Rated speed rpm : 1440 guide sleeve travel mm : 13.50
Tolerance cm3/1000 strokes : +- 1.0	Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : +- 4.0	GUIDE SLEEVE POSITION
Spreed	Rated speed rpm : 1295
Tolerance cm3/1000 strokes : 5.0	Rack travel in mm: 10.65 Tolerance mm: +- 2.70
Check tolerance cm3/1000s. : 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 275	Rated speed rpm : 600 Aneroid pressure hPa : 1200
Rack travel in mm : 6.40	• · · · · · · · · · · · · · · · · · · ·
Tolerance mm : + 0.10	+ Del. quantity + cm3/1000 strokes : 203.0
Del. quantity	+ Tolerance
cm3/1000 strokes : 19.0	+ cm3/1000 strokes : +- 1.0
Tolerance	+ Check tolerance
cm3/1000 strokes : +- 3.0	+ cm3/1000s. : +- 4.0
Check tolerance	+ Spreed
cm3/1000s. : +- 6.0	+ Tolerance
Spreed	+ cm3/1000 strokes : 5.0
Tolerance	+ Check tolerance
cm3/1000 strokes : 8.0	- cm3/1000s. : 9.0
Check tolerance	†
cm3/1000s. : 12.0	I
	T CONTROL LEVER
(B) SETTING OF INJECTION PUMP	- CONTROL CEVER
WITH GOVERNOR	∔ control lever
	position degree : 118.0
	+ tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	+
	+ RATED SPEED
Rated speed rpm : 275	10 (0
guide sleeve travel mm : 1.70	+ rack travel mm : 10.60 + Rated speed rpm : 1145
travel mm : 1.70 Tolerance mm : ← 0.20	Tolerance 1/min : + 5
roter arise min	Total under trimite
Rated speed rpm : 1180	rack travel mm : 4.00
guide sleeve	Rated speed rpm : 1245
travel mm : 10.07	Tolerance 1/min : +- 15
Tolerance mm : +- 0.15	+
	+ rack travel mm : 0.50
Rated speed rpm : 802	+ Tolerance mm : +- 0.50
guide sleeve	+ Rated speed rpm : 1350
travel mm : 6.49	†
Tolerance mm : +- 0.25	I
Rated speed rpm : 460 guide sleeve	LOW IDLE
travel mm : 3.77	+
Tolerance mm : +- 0.25	control lever position degree : 75.0

		t.
tolerance degree	: +- 4.0	Poted aread may 100
Testing:		+ Rated speed rpm : > 180 + Rated speed rpm : < 220
resting.		T Nated Speed 1 pill . < 220
Rated speed rpm	: 275	∔ Check
rack travel mm		speed 1/min : > 160
rack travel mm Tolerance mm	; +- 0.10	+ Check
TOTAL GITTE TIME	3.13	+ speed 1/min : < 240
Rated speed rpm	: 175	
		
CRT mm min.	: > 7.90	FUEL DELIVERY CHARACTERISTICS
		+
Rated speed rpm	: 315	+ Aneroid pressure
		+ hPa : 1200
		Rated speed rpm : 1100
TORQUE CONTROL		+ Del. quantity
		+ cm3/1000 strokes : 236.0
Rated speed rpm	: 600 : 11.40	† Tolerance
rack travel mm Tolerance mm	: 11.40	- cm3/1000 strokes : +- 3.0
Tolerance mm	: ← 0.05	+ Check tolerance
	4405	+ cm3/1000s. : $+$ 6.0
Rated speed rpm	: 1700	†
rack travel mm	: 17.65	+ Aneroid pressure
Tolerance mm	: +- 0.15	+ hPa : - + Rated speed rpm : 550
5 4	. 900	
Rated speed rpm	: 800	+ Del. quantity
rack travel mm Tolerance mm	11.55	- cm3/1000 strokes : 141.0
iolerance mm	: +- 0.10	+ Tolerance
		- cm3/1000 strokes : +- 1.0
ANICDOTO / SI TETUDE		+ Check tolerance + cm3/1000s. : +- 4.0
ANEROID/ALTITUDE		+ cm3/1000s. : +- 4.0
COMPENSATOR TEST		Ī
		BREAKAWAY
SETTING		DICARAMA
OF11714G		<u> </u>
	4400	Rack travel in mm : 10.60
Rated speed rom	: 1100	
Rated speed rpm Pressure hPa	: 1100 : 1200	
Pressure hPa	: 1200	Rated speed rpm : 1145
Pressure hPa rack travel mm	: 1200 : 11.65	Rated speed rpm : 1145
Pressure hPa	: 1200 : 11.65	Rated speed rpm : 1145
Pressure hPa rack travel mm	: 1200 : 11.65	Rated speed rpm : 1145 Tolerance 1/min : +- 5
Pressure hPa rack travel mm Tolerance mm MEASUREMENT	: 1200 : 11.65	Rated speed rpm : 1145
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa	: 1200 : 11.65 : +- 0.05	Rated speed rpm : 1145 Tolerance 1/min : +- 5 STARTING FUEL DELIVERY
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm	: 1200 : 11.65 : + 0.05 : - : 1100	Rated speed rpm : 1145 Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm	: 1200 : 11.65 : + 0.05 : - : 1100 : 9.40	Rated speed rpm : 1145 Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.90
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm	: 1200 : 11.65 : + 0.05 : - : 1100	Rated speed rpm : 1145 Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.90 Tolerance mm : +- 0.50
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 1200 : 11.65 : + 0.05 : + 100 : 9.40 : + 0.20	Rated speed rpm : 1145 Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.90 Tolerance mm : +- 0.50 Del. quantity
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm	: 1200 : 11.65 : + 0.05 : + 100 : 9.40 : + 0.20	Rated speed rpm : 1145 Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.90 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 110.0
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: 1200 : 11.65 : + 0.05 : + 0.05 : 1100 : 9.40 : + 0.20 : 1100	Rated speed rpm : 1145 Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.90 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 110.0 Tolerance
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa	: 1200 : 11.65 : + 0.05 : + 0.05 : 1100 : 9.40 : + 0.20 : 1100 : 230	Rated speed rpm : 1145 Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.90 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : +- 15.0
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm	: 1200 : 11.65 : + 0.05 : + 0.05 : 1100 : 9.40 : + 0.20 : 1100 : 230 : 9.95	Rated speed rpm : 1145 Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.90 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa	: 1200 : 11.65 : + 0.05 : + 0.05 : 1100 : 9.40 : + 0.20 : 1100 : 230	Rated speed rpm : 1145 Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.90 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : +- 15.0
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1200 : 11.65 : + 0.05 : + 0.05 : 1100 : 9.40 : + 0.20 : 1100 : 230 : 9.95 : + 0.20	Rated speed rpm : 1145 Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.90 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1200 : 11.65 : + 0.05 : + 0.05 : 1100 : 9.40 : + 0.20 : 1100 : 230 : 9.95 : + 0.20 : 360	Rated speed rpm : 1145 Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.90 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 1200 : 11.65 : + 0.05 : + 0.05 : 1100 : 9.40 : + 0.20 : 1100 : 230 : 9.95 : + 0.20 : 360 : 11.15	Rated speed rpm : 1145 Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.90 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1200 : 11.65 : + 0.05 : + 0.05 : 1100 : 9.40 : + 0.20 : 1100 : 230 : 9.95 : + 0.20 : 360	Rated speed rpm : 1145 Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.90 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance cm3/1000s. : +- 19.0
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 1200 : 11.65 : + 0.05 : + 0.05 : 1100 : 9.40 : + 0.20 : 1100 : 230 : 9.95 : + 0.20 : 360 : 11.15	Rated speed rpm : 1145 Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.90 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance
Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 1200 : 11.65 : + 0.05 : + 0.05 : 1100 : 9.40 : + 0.20 : 1100 : 230 : 9.95 : + 0.20 : 360 : 11.15	Rated speed rpm : 1145 Tolerance 1/min : +- 5 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 11.90 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 110.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance cm3/1000s. : +- 19.0

Del. quantity		
cm3/1000 strokes	:	19.0
Tolerance		
cm3/1000 strokes	; +-	3.0
Check tolerance		
cm3/1000s.	: +-	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0
	:	12.0

Note remarks

Refer to Service Info for cest and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 02,07,96 : ISO 4113

Combination No. : 0 402 746 609

Injection pump

Pump designation : PES6P130A7208S7411

EP type number : 0 412 736 808

Governor

Governer design. : RQ275/950PA1274 : 0 421 801 807 Governer no.

Cust. part No. : 645 739

Customer-spec. information

: RABA Customer

: SIEHE BEMERKUNG Motor

Power KW : 190.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C : +-2.0

: 1 417 413 047 Overflow valve

1.5 Inlet press. bar : : +- 0.1 Tolerance bar

Overflow quantity

min. L/h : 160 Tolerance l/h : **←** 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 25.0 Tolerance bar : +- 1.0

: 5.50 Prestroke mm : +- 0.05 Tolerance mm

Check

tolerance mm : **←** 0.10

Rack travel in mm : 20.50 Tolerance mm : +- 0.50

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.30

Check

tolerance °N₩ : + - 0.50

Start of delivery mark

: +- 0.50Tolerance

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 11.90

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 224.0	+ Rated speed rpm : 450 + guide sleeve + travel mm : 6.00
Tolerance cm3/1000 strokes : +- 1.0	Tolerance mm : +- 0.10
Check tolerance cm3/1000s. : +- 4.0	Rated speed rpm : 1200 guide sleeve travel mm : 11.50
Spreed	Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes : 5.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 900
Rated speed rpm : 275	+ Rack travel in mm : 20.00 + Tolerance mm : +- 0.80 +
Rack travel in mm : 4.20 Tolerance mm : +- 0.10	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 24.0	Rated speed rpm : 600 Aneroid pressure
Tolerance cm3/1000 strokes : +- 3.0	hPa : 1500 Del. quantity
Check tolerance cm3/1000S. : +- 6.0 Spreed	+ cm3/1000 strokes : 224.0 + Tolerance + cm3/1000 strokes : +- 1.0
Tolerance cm3/1000 strokes : 8.0	Check tolerance cm3/1000s. : +- 4.0
Check tolerance cm3/1000s. : 12.0	- Spreed - Tolerance
(D) COTTANO OF TALLECTION DUMP	- cm3/1000 strokes : 5.0 - Check tolerance - cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ cm3/1000s. : 9.0
GUIDE SLEEVE TRAVEL	CONTROL LEVER
Rated speed rpm : 275 guide sleeve	control lever position degree : 33.0
travel mm : 2.06 Tolerance mm : +- 0.20	tolerance degree : +- 4.0
Rated speed rpm : 1007 guide sleeve	tolerance degree : + 4.0
travel mm : 6.56 Tolerance mm : + 0.15	RATED SPEED
Rated speed rpm : 950 guide sleeve	rack travel mm : 10.90 Rated speed rpm : 995
travel mm : 6.00 Tolerance mm : +- 0.10	Tolerance 1/min : +- 5
Rated speed rpm : 361 guide sleeve	rack travel mm : 4.00 - kated spe?d rpm : 1095 - Tolerance 1/min : +- 15
travel mm : 4.45	+
Tolerance mm : +- 0.10	rack travel mm : 0.50 Tolerance mm : +- 0.50

Rated speed rpm	: 1200	Pressure hPa : 260 rack travel mm : 9.20 Tolerance mm : + 0.15
LOW IDLE		∔
		Pressure hPa : 440
		rack travel mm : 11.00
control lever	77.0	+ Tolerance mm : +- 0.05
position degree	: 73.0	†
colerance degree	: +- 4.0	CTART CUT OUT
control lever		START CUT-OUT
osition degree	• 12 0	Rated speed rpm : < 100
colerance degree	: +- 4.0	+ Rated speed rpm : > 195
occi diloc degi ee		Hasea opera vp
esting:		L Check
_		+ speed 1/min : < 80
Rated speed rpm	: 275	+ Check
rack travel mm Tolerance mm	: 4.20	speed 1/min : > 215
Tolerance mm	: +- 0.10	†
	. 2.00	FUEL DEL TUENT ALLANDA CATALOGO
rack travel mm Rated speed rpm	:	+ FUEL DELIVERY CHARACTERISTICS
Rated speed rpm Folerance 1/min	; 337 • <u>1</u> 20	Ananaid pressure
ioterance i/min	. — 20	+ Aneroid pressure + hPa : 1500
Rated speed rpm	: 175	+ Rated speed rpm : 950
dran shach thin	• 112	+ Del. quantity
CRT mm min.	: > 6.80	- cm3/1000 strokes : 219.5
W/L HWH WILLIAM		+ Tolerance
<u></u>		cm3/1000 strokes : + 3.0
ORQUE CONTROL		↓ Check tolerance
TOPE PROPERTY		+ cm3/1000s. : +- 6.0
Rated speed rpm	: 600	+
rack travel mm	: 11.90	Aneroid pressure
Tolerance mm	: +- 0.05	+ hPa : -
		Rated speed rpm : 500
Rated speed rpm rack travel mm	: 950	+ Del. quantity
rack travel mm	: 11.90	cm3/1000 strokes : 147.0
Tolerance mm	: +- 0.10	+ Tolerance
		- cm3/1000 strokes : +- 2.0
MEDOTO / AL TETUTE		Check tolerance cm3/1000s. : +- 4.0
NEROID/ALTITUDE		T CM3/10008. : T- 4.0
		+ BREAKAWAY
ETTING		†
petad enach nam	: 500	Rack travel in mm: 10.90
lated speed rpm -	: 1500	Rated speed rpm : 995
ressure ma rack travel mm	: 11.90	Tolerance 1/min : +- 5
Pressure hPa Pack travel mm Tolerance mm	: + 0.05	+
EASUREMENT		
		STARTING FUEL DELIVERY
ressure hPa	: -	100
ated speed rpm		Rated speed rpm : 100 - rack travel mm : 20.50
ack travel mm	: 8.20	+ rack travel mm : 20.50 + Tolerance mm : + 0.50
olerance mm	: +- 0.20	
	: 500	+ Del. quantity + cm3/1000 strokes : 110.0
ated speed rpm		

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000S. : +- 24.0

LOW IDLE

Rated speed rpm : 275

Del. quantity cm3/1000 strokes : 24.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s. 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 02.07.96 Test oil : ISO 4113

Combination No. : 0 402 746 997

Injection pump

Pump designation : PES6P120A720RS7224

: -2

EP type number : 0 412 726 893

Governor

Governer design. : RQV275...1100PA975

: -3K

Governer no. : 0 421 815 350

Cust. part No. :

Customer-spec. information

Customer : IVECO-AIFO

Motor : 8361 SRM 40.10

TEST L'ENCH EQUIREMENTS

Inie+ ine : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5
Tolerance bar : +- 0.1

Overflow quantity

min. L/h : 140 Tolerance L/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.15
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance *NW : + 0.50

Start of delivery mark

Check

tolerance $^{\circ}NW$: \leftarrow 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 12.75

Tolerand mm : +- 0.05

Del. quantity cm3/1000 strokes :	218.0	Rated speed rpm : 1350 guide sleeve travel mm : 13.50
Tolerance cm3/1000 strokes : +-	1.0	Tolerance mm : +- 0.50
Check tolerance cm3/1000S. : +-	4.0	GUIDE SLEEVE POSITION
Spreed		Rated speed rpm : 1210 Rack travel in mm : 10.70
Tolerance cm3/1000 strokes :	5.0	Tolerance mm : +- 1.30
Check tolerance cm3/1000s. :	9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm :	275	Rated speed rpm : 1100 Aneroid pressure
Dool Americal Source	5 50	hPa : 1200
	0.10	Del. quantity cm3/1000 strokes : 218.0
Del. quantity cm3/1000 strokes :	26.0	Tolerance cm3/1000 strokes : +- 1.0
Tolerance cm3/1000 strokes : +-	3.0	Check tolerance cm3/1000s. : +- 4.0
Check tolerance	+	Spreed
cm3/1000S. : +- Spreed	6.0	Tolerance cm3/1000 strokes : 5.0
Tolerance cm3/1000 strokes :	8.0	Check tolerance cm3/1000s. : 9.0
Check tolerance	J. J.	(1137 10003).0
cm3/1000s. :	12.0	
	Ţ	CONTROL LEVER
(B) SETTING OF INJECTION	N PUMP	
WITH GOVERNOR	1	control lever position degree : 120.0
		tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	+	-
Rated speed rpm :	275	RATED SPEED
guide sleeve		rack travel mm : 11.70
travel mm :	2.00	Rated speed rpm : 1145
Tolerance mm : +-	0.20	Tolerance 1/min : +- 5
	150 +	rack travel mm : 4.00
guide sleeve	†	Rated speed rpm : 1235
travel mm : +	10.45	Tolerance 1/min : +- 15
Totel affective	1	rack travel mm : 0.50
	764	Tolerance mm : +- 0.50 Rated speed rpm : 1350
guide sleeve travel mm :	6.24	hated speed pill . 1990
Tolerance mm : +-		
Rated speed rpm : 4	430	LOW IDLE
travel mm :	3.63	
Tolerance mm : +-	0.25	control lever position degree : 73.0

A		Tolerance mm : +- 0.20
tolerance degree	+ 4.0	Tolerance mm : +- 0.20
Testing:	+	Pressure hPa : 750
Rated speed rpm	. 275	rack travel mm : 11.35 Tolerance mm : +- 0.05
rack travel mm	÷ 5.50	Totel ance min . To 0.05
rack travel mm Tolerance mm	: +- 0.10	
	+	START CUT-OUT
Rated speed rpm	: 100 +	
CRT mm min.	. > 4.70	Rated speed rpm : > 170 Rated speed rpm : < 220
CRI mm min.	1	kated speed rpm : \ 220
Rated speed rpm	: 335	Check
,	+	speed 1/min : > 150
	+	Check
TORQUE CONTROL	†	speed 1/min : < 240
Rated speed rpm	: 1100 I	
rack travel mm		FUEL DELIVERY CHARACTERISTICS
Tolerance mm	: +- 0.05 }	
	+	Aneroid pressure
Rated speed rpm rack travel mm	900	hPa : 1200 Rated speed rpm : 900
rack travel mm Tolerance mm	: + 0.10	Del. quantity
locel differ likil	1	cm3/1000 strokes : 228.0
Rated speed rpm	: 500	Tolerance
rack travel mm	: 11.80 +	cm3/1000 strokes : +- 3.0
Tolerance mm	: +- 0.10 +	Check tolerance
0-41	. 700	cm3/1000s. : +- 6.0
Rated speed rpm rack travel mm	: 12 50	Aneroid pressure
Tolerance mm	: + 0.10	hPa : 1200
TO COT CITIOS TIME	+	Rated speed rpm : 500
Rated speed rpm	: 350	Del. quantity
rack travel mm	: 11.40	cm3/1000 strokes : 243.0
Tolerance mm	: + 0.20	Tolerance cm3/1000 strokes : +- 3.0
	I	Check tolerance
ANEROID/ALTITUDE	1	cm3/1000s. : +- 6.0
COMPENSATOR TEST	 	
	+	Aneroid pressure
05777110	†	hPa : -
SETTING	İ	Rated speed rpm : 500 Del. quantity
Rated speed rpm	: 900	cm3/1000 strokes : 120.0
Pressure hPa	: 1200	Tolerance
rack travel mm	: 12.75	cm3/1000 strokes : + 1.0
Tolerance mm	: +- 0.05 +	Check tolerance
MEACUDEMENT	†	cm3/1000s. : +- 4.0
MEASUREMENT	I	
Pressure hPa	: - +	BREAKAWAY
Rated speed rpm	: 900	
rack travel mm	: 7.50 +	B. J. A. 21 to 44 70
Tolerance mm	: +- 0.20	Rack travel in mm : 11.70 Rated speed rpm : 1145
Rated speed rpm	: 900	Rated speed rpm : 1145 Tolerance 1/min : +- 5
Nated Speed I pill	. 100	1 - Contract of the state of th
Pressure hPa	: 410	
rack travel mm	: 8.80 +	

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 140.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0

Check tolerance

: +- 19.0 cm3/1000s.

LOW IDLE

275 Rated speed rpm

Del. quantity cm3/1000 strokes : 26.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s. 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 01.07.96 Test oil : ISO 4113

Combination No. : 0 402 846 054

Injection pump

Pump designation : PE6P120A320RS8017 EP type number : 0 412 826 018

Governor

Governer design. : RQV300...1100PA1017

: -1

Governer no. : 0 421 814 023

Cust. part No. : 3826087 PO3 v.10/95

Customer—spec. information Customer : PENTA

Motor : TWD 1030 ME

Power KW : 212.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

engur iiiii . 000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.15
Tolerance mm : +- 0.05
Check
tolerance mm : +- 0.10

Rack travel in mm : 7.80

Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : + 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm : 11.05
Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 205.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s.	: +- 4.0	travel mm : 3.11 Tolerance mm : +- 0.25
Spreed Tolerance cm3/1000 strokes	: 8.0	Rated speed rpm : 1400 guide sleeve
Check tolerance cm3/1000s.	: 11.0	† travel mm : 11.50 + Tolerance mm : +- 0.50
Rated speed rpm	: 300	GUIDE SLEEVE POSITION
	4.40	Rated speed rpm : 1250
Rack travel in m Tolerance mm Del. quantity cm3/1000 strokes	: +- 0.30	Rack travel in mm : 10.00 Tolerance mm : +- 2.00
Tolerance cm3/1000 strokes Check tolerance	: +- 2.5	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. Spreed	: ← 5.0	Rated speed rpm : 750 Aneroid pressure
Tolerance cm3/1000 strokes Check tolerance	: 5.0	hPa : 1200 Del. quantity cm3/1000 strokes : 205.0
cm3/1000s.	: 8.0	Tolerance cm3/1000 strokes : +- 1.0
(B) SETTING OF IN	NJECTION PUMP	+ Check tolerance + cm3/1000S. : + 4.0 + Spreed + Tolerance
GUIDE SLEEVE TRAY		+ cm3/1000 strokes : 8.0 + Check tolerance
Rated speed rpm guide sleeve		+ cm3/1000s. : 11.0
travel mm Tolerance mm	: 1.19 : + 0.25	CONTROL LEVER
Rated speed rpm guide sleeve travel mm Tolerance mm	: 8.19	control lever position degree : 58.0 tolerance degree : +- 4.0
Rated speed rpm	: 816	control lever position degree : 114.0 tolerance degree : +- 4.0
guide sleeve travel mm Tolerance mm	: + 0.25	RATED SPEED
Rated speed rpm guide sleeve travel mm Tolerance mm		rack travel mm : 10.05 Rated speed rpm : 1125 Tolerance 1/min : +- 5
Rated speed rpm	: 435	rack travel mm : 4.00 Rated speed rpm : 1210 Tolerance 1/min : +- 15
guide sleeve travel mm Tolerance mm	: 2.45 : + 0.25	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1320
Rated speed rpm	: 530	Rated speed rpm : 1320

FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa	• -
Rated speed rpm	700
Del. quantity cm3/1000 strokes	: 132.0
Tolerance	
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s.	: +- 4.0
DDEAUAUAV	
BREAKAWAY	
Rack travel in mm	: 10.05
Rated speed rpm	: 1125
Tolerance 1/min	: +- 5
LOW IDLE	
Rated speed rpm	: 300
Del. quantity cm3/1000 strokes	: 18.0
Tolerance	
cm3/1000 strokes Check tolerance	: +- 2.5
cm3/1000s.	: +- 5.0
Spreed Tolerance	
cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 8.0
 -	2.3
End of test speci	fication sheet
zila or cool opeo.	

Tolerance mm : \leftarrow 0.05

LOW IDLE

control lever position degree : 80.0 tolerance degree : +- 4.0

control lever

position degree : 15.0 tolerance degree : + 4.0

Testing:

Rated speed rpm : 300 rack travel mm : 4.40 Tolerance mm : +- 0.30

Rated speed rpm : 200

CRT mm min. : > 6.00

Rated speed rpm : 330

TORQUE CONTROL

Rated speed rpm : 750 rack travel mm : 11.05 Tolerance mm : +- 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1200
rack travel mm : 11.05
Tolerance mm : + 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 7.80
Tolerance mm : + 0.10

Rated speed rpm : 500

Pressure hPa : 780 rack travel mm : 2.90 Tolerance mm : + 0.20

Pressure hPa : 300 rack travel mm : 0.25

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 08.02.96 Edition : ISO 4113 Test oil

Combination No. : 0 402 946 302

Injection pump

Pump designation : PES6P120A720LS8514 EP type number : 0 412 926 210

Governor

Governer design. : RQV250...950PA1209K

: 0 421 815 972 Governer no.

Cust. part No. : 1369074

Customer-spec. information : SCANIA Customer Motor : DSC1206

TEST BENCH REQUIREMENTS

: EHAB Inlet line

Test oil inlet

temp. °C Tolerance °C 2.0

: 2 417 413 082 Overflow valve

Inlet press. bar : 2.5

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

251.5 bar : + 1.5 Tolerance bar

: 1 680 750 008 Test lines

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 4.00 : **+** 0.05 Tolerance mm Check tolerance mm : + 0.10

Rack travel in mm : 10.50 : +- 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance Check

: **←** 0.50 tolerance °NW

Start of delivery blocking

*NW after s.o.d. : 180.00 : +- 0.50 Tolerance

Check

: +~ 0.75 tolerance *NW

: 1 Barrel no.

BASIC SETTING

825 Rated speed rpm :

Rack travel in mm : 13.45 Tolerance mm : +- 0.05

Del. quantity

375.0 cm3/1000 strokes :

Tolerance		+ Tolerance mm : +- 0.25	
cm3/1000 strokes	: +- 1.0	+	
		Rated speed rpm : 390	
Check tolerance		guide sleeve	
c m3/1000 S.	: +- 11.0	† travel mm : 3.50	
		+ Tolerance mm : +- 0.25	
Spreed		+	
Tolerance		+ Rated speed rpm : 1310	
cm3/1000 strokes	: 8.0	🕂 guide sleeve	
		+ travel mm : 13.50	
Check tolerance		+ Tolerance mm : +- 0.50	
cm3/1000s.	: 14.0	+	
		+	
Rated speed rpm	: 250	+ GUIDE SLEEVE POSITION	
		+	
	<u>-</u>	Rated speed rpm : 1154	
Rack travel in m		† _ , , , , , , , , , , , , , , , , , ,	
Tolerance mm	: +- 0.30	+ Rack travel in mm : 12.45	
Del. quantity		† Tolerance mm : +- 1.30	
cm3/1000 strokes	: 22.0	†	
Tolerance	. 7.0	FILL LOAD DELYMENT AT ELLE	
cm3/1000 strokes	: +- 3.0	FULL LOAD DELIVERY AT FULL LOAD ST	٥٢
Check tolerance		Dated aread are : 035	
cm3/1000s.	: +- 6.0	+ Rated speed rpm : 825 + Aneroid pressure	
Spreed		+ hPa : 1500	
Tolerance cm3/1000 strokes	: 4.0	Del. quantity	
Check tolerance	: 4.0	cm3/1000 strokes : 375.0	
cm3/1000s.	: 8.0	Tolerance	
(10000)	. 0.0	+ cm3/1000 strokes : +- 1.0	
		+ Check tolerance	
(B) SETTING OF I	VIECTION PUMP	+ cm3/1000s. : +- 11.0	
WITH GOVERNOR	10 2 0 7 1 0 1 1 0 1 11	+ Spreed	
WITH GOVERNOR		+ Tolerance	
		- + cm3/1000 strokes : 8.0	
GUIDE SLEEVE TRAN	VEL	- Check tolerance	
		+ cm3/1000s. : 14.0	
Rated speed rpm	: 250	+	
guide sleeve		+	
travel mm	: 1.67	+	
Tolerance mm	: +- 0.20	+ CONTROL LEVER	
	. = . =	+	
Rated speed rpm	: 1017	+ control lever	
guide sleeve	2 22	position degree : 61.0	
travel mm	: 9.08	tolerance degree : +- 4.0	
Tolerance mm	: 0.15	†	
-		control lever	
Rated speed rpm	: 661	+ position degree : 115.0	
guide sleeve	. 5.50	tolerance degree : +- 4.0	
travel mm	: 5.50	T DATED SDEED	
Tolerance mm	: 0.25	+ RATED SPIED	
Datad araad ara	. 302	rack travel mm : 11.70	
Rated speed rpm	: 302		
guide sleeve	: 2.44		
travel mm	: 2.44 : +- 0.25	+ Tolerance 1/min : +- 5	
Tolerance mm	· + 0.25	rack travel mm : 4.00	
Dated cheed and	: 352	Rated speed rpm : 1110	
Rated speed rpm guide sleeve	. 336	Tolerance 1/min : +- 15	
travel mm	: 3.14	1 Total and 17 min	
CLOSET IIIII	. 5.17	ī	

rack travel mm Tolerance mm Rated speed rpm		+ rack travel mm : 7.20 + Tolerance mm : +- 0.20 +
		Rated speed rpm : 825
LOW IDLE		Pressure hPa : 435 rack travel mm : 8.90 Tolerance mm : +- 0.15
control lever position degree tolerance degree	: 72.0 : +- 4.0	Pressure hPa : 700 rack travel mm : 10.10 Tolerance mm : +- 0.05
control lever position degree tolerance degree Testing:	: 18.0 : + 4.0	START CUT-OUT Rated speed rpm : > 100 Rated speed rpm : < 170
Rated speed rpm rack travel mm Tolerance mm	: 4.60	+ Check + speed 1/min :> 80 + Check + speed 1/min :< 190
Rated speed rpm	: 150	
CRT mm min.	: > 6.10	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm	: 275	Aneroid pressure hPa : 1500 Rated speed rpm : 650
TORQUE CONTROL		Del. quantity cm3/1000 strokes : 378.0
Rated speed rpm rack travel mm Tolerance mm	: 13.45	Tolerance cm3/1000 strokes : +- 4.0 Check tolerance
Rated speed rpm rack travel mm Tolerance mm	: 650 : 12.50 : ← 0.10	cm3/1000s. : +- 11.0 Aneroid pressure + hPa : 1500 + Rated speed rpm : 950
Rated speed rpm rack travel mm Tolerance mm	: 12.75	Del. quantitycm3/1000 strokes : 331.0Tolerance
ANEROID/ALTITUDE		
COMPENSATOR TEST		Aneroid pressure
SETTING		+ hPa : - + Rated speed rpm : 500 + Del. quantity
Rated speed rpm Pressure hPa rack travel mm	: 825 : 1500	- cm3/1000 strokes : 197.0 - Tolerance
rack travel mm Tolerance mm	: 13.45 : +- 0.10	cm3/1000 strokes : +- 1.0 Check tolerance
MEASUREMENT		- cm3/1000s. : +- 4.0
Pressure hPa Rated speed rpm	: - : 825	BREAKAWAY

E03

Rack travel in mm : 11.70 Rated speed rpm : 995 Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 10.20 Tolerance mm : + 0.50

LOW IDLE

Rated speed rpm : 250 Del. quantity cm3/1000 strokes : 22.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s.: +--6.0 Spreed Tolerance 4.0 cm3/1000 strokes : Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 12.07.95 : ISO 4113

Combination No. : 0 403 244 045A

Injection pump

Pump designation : PES4MW100/720RS1519

: -3

EP type number : 0 413 204 018

Governor

Governer design. : RQV300...1300MW132

: -3

Governer no.

: 0 420 083 296

Cust. part No. : 0240740302

Customer-spec. information Customer : MB-NFZ : 0M364LA Motor Power KW : 77.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar : +- 1.5 Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 4.55 : +- C.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.00 Tolerance mm : +- 1.00

Firing order : 1- 3- 4- 2

: 0-90-180-270 Phasing

Tolerance : +- 0.50

Check

: + - 0.75tolerance °NW

BASIC SETTING

Rated speed rpm : 1270

Rack travel in mm: 13.00 : +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 89.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +-3.0

Spreed

Tolerance

cm3/1000 strokes : 4.5

Check tolerance cm3/1000s. : 7.0	Rated speed rpm : 1500
Rated speed rpm : 300	Rack travel in mm : 10.00 Tolerance mm : + 2.70
Nated Speed (pill . 300	- Totel and men
Rack travel in mm : 4.00 Tolerance mm : +- 0.10	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 12.0	Rated speed rpm : 1300 Aneroid pressure
Tolerance cm3/1000 strokes : +- 2.0	+ hPa : 700 + Del. quantity
Check tolerance cm3/1000s. : +- 4.5	cm3/1000 strokes : 89.0 Tolerance
Spreed Tolerance	+ cm3/1000 strokes : + 1.0 + Check tolerance
cm3/1000 strokes : 2.0 Check tolerance	cm3/1000s. : +- 3.0 + Spreed
cm3/1000s. : 4.0	Tolerance cm3/1000 strokes : 4.5
(D) CETTING OF THECTION DUMD	Check tolerance cm3/1000s. : 7.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ CIIS/ 10003 /.0
GUIDE SLEEVE TRAVEL	CONTROL LEVER
Rated speed rpm : 300	control lever position degree : 111.0
guide sleeve travel mm : 0.91	tolerance degree : +- 4.0
Tolerance mm : + 0.20	RATED SPEED
Rated speed rpm : 1353 guide sleeve	rack travel mm : 12.00
travel mm : 7.02 Tolerance mm : +- 0.15	Rated speed rpm : 1345 Tolerance 1/min : +- 10
Rated speed rpm : 1090	rack travel mm : 4.00
guide sleeve travel mm : 5.21	+ Rated speed rpm : 1470 + Tolerance 1/min : + 5
Tolerance mm : +- 0.25	rack travel mm : 0.50
Rated speed rpm : 790 guide sleeve	+ Tolerance mm : + 0.50 + Rated speed rpm : 1550
travel mm : 3.98 Tolerance mm : +- 0.25	‡
Rated speed rpm : 1759 guide sleeve	LOW IDLE
travel mm : 12.00	control lever
Tolerance mm : + 0.25 Rated speed rpm : 1870	+ position degree : 74.0 + tolerance degree : +- 4.0
guide sleeve	Testing:
travel mm : 13.50 Tolerance mm : +- 0.50	+
GUIDE SLEEVE POSITION	+ Rated speed rpm : 300 + rack travel mm : 4.00 + Tolerance mm : + 0.10

Rated speed rpm	: 200	+ Del. quantity
	/ 70	+ cm3/1000 strokes : 82.0
CRT mm min.	: > 4.70	+ Tolerance + cm3/1000 strokes : +- 1.5
TOPOUE CONTROL		
TORQUE CONTROL		+ Spreed : += 4.0
Rated speed rpm	• 1270	Tolerance
rack travel mm		+ cm3/1000 strokes : 6.0
Tolerance mm		+ Check tolerance
TOCCT CITOC TIAN		- cm3/1000s. : 9.0
Rated speed rpm	: 750	+
rack travel mm	: 13.00	+ Aneroid pressure
Rated speed rpm rack travel mm Tolerance mm	: + 0.10	+ hPa : -
		+ Rated speed rpm : 500
		+ Del. quantity
ANEROID/ALTITUDE		- cm3/1000 strokes : 56.0
COMPENSATOR TEST		+ Tolerance
		+ cm3/1000 strokes : +- 1.0
0577710		+ Check tolerance
SETTING		- cm3/1000s. : + 3.0
Dotad opend was	. 500	
Rated speed rpm Pressure hPa	: 700	BREAKAWAY
rack travel mm	: 13.00	I
Tolerance mm		I
TO CET STICE IN	0.05	Rack travel in mm : 12.00
MEASUREMENT		Rated speed rpm : 1345
- control of the til		+ Tolerance 1/min : + 10
Pressure hPa	: -	4
Rated speed rpm	: 500	+
Tolerance mm	: ← 0.10	
		+ STARTING FUEL DELIVERY
Rated speed rpm	: 500	†
		+ Rated speed rpm : 100
Pressure hPa		+ Del. quantity
rack travel mm	: 0.90	+ cm3/1000 strokes : 120.0
Tolerance mm	: +- 0.10	+ Tolerance
December hos	. 150	cm3/1000 strokes : +- 5.0 Check tolerance
Pressure hPa rack travel mm	: 150 : 0.30	+ cm3/1000s. : +- 8.0
Tolerance mm	: +- 0.10	T (m3/10003
roterance (IMI)	0.10	Ī
START CUT-OUT		
		+ LOW IDLE
Rated speed rpm	: > 100	† p. 4. 4
Rated speed rpm	: < 200	+ Rated speed rpm : 300
		+ Del. quantity
Check	. > 00	+ cm3/1000 strokes : 12.0
speed 1/min	: > 80	+ Tolerance + cm3/1000 strokes : +- 2.0
Check	: < 220	+ cm3/1000 strokes : +- 2.0 + Check tolerance
speed 1/min	: < 220	+ cm3/1000s. : +- 4.5
FUEL DELIVERY CHA	ADACTEDISTICS	Tolerance
1006 DELIVERT LEA	3位内に「ヒバエン(エレン	
		+ CD3/11011 STCOKES * / 11
Aneroid pressure		+ Check tolerance
Aneroid pressure hPa Rated speed rpm	: 700 : 750	

E07

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 10.07.96 : ISO 4113 Test oil

Combination No. : 0 400 866 227

Injection pump

Pump designation : PES6A95D410/3RS2907

EP type number : 0 410 896 884

Governor

Governer design. : RSV325...1250A5C870L

Governer no. : 0 420 232 625

Cust. part No. : 0423 1964 KY

Customer-spec. information Customer : KHD-DMI : BF6L 913 Motor : 118.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 Tolerance bar

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 3.00 Tolerance mm : +- 0.05 Check tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 13.00 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 82.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. 3.0

Spreed Tolerance

cm3/1000 strokes : 3.5

Check tolerance	+ rack travel mm : 12.00
cm3/1000s. : 8.0	+ Rated speed rpm : 1295
	+ Tolerance 1/min : +- 5
Rated speed rpm : 325	}
,	+ rack travel mm : 4.00
	+ Rated speed rpm : 1355
Rack travel in mm : 9.40	+ Tolerance 1/min : + 15
Tolerance mm : +- 0.10	+
Del. quantity	rack travel mm : 0.85
cm3/1000 strokes : 14.5	+ Tolerance mm : +- 0.55
Tolerance	Rated speed rpm : 1520
cm3/1000 strokes : + 2.0	
Check tolerance	+ rack travel mm : 4.00
cm3/1000s. : +- 4.5	+ Rated speed rpm : 1375
	+ ' '
	}
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	+ LOW IDLE
	+
	+
	- control lever
GUIDE SLEEVE POSITION	position degree : 69.0
= · · · · · · · · · · · · · · · · · · ·	+ tolerance degree : + 4.0
Rated speed rpm : 800	+
	Setting point w/out bumper spring
Rack travel in mm : 0.50	+
Tolerance mm : +- 0.20	+ Rated speed rpm : 325
	rack travel mm : 8.90
governor spring	1
pre-tension	Testing:
click setting x : 3.25	
ceron occurrig x . oras	Rated speed rpm : 325
FULL LOAD DELIVERY AT FULL LOAD STOP	+ rack travel mm : 9.40 + Tolerance mm : +- 0.10
TOLL LOAD DELIVERY AT TOLL LOAD STOT	- Total arias initial
Rated speed rpm : 1250	rack travel mm : 2.00
Aneroid pressure	+ Rated speed rpm : 500
hPa : 1000	+ Tolerance 1/min : + 30
Del. quantity	1 Total and 17 mm
cm3/1000 strokes : 82.5	
Tolerance	TORQUE CONTROL
cm3/1000 strokes : +- 1.0	1
Check tolerance	Rated speed rpm : 1250
cm3/1000s. : +- 3.0	rack travel mm : 13.00
Spreed	+ Tolerance mm : + 0.05
Tolerance	1 TOCCI DITICE MAIL
cm3/1000 strokes : 3.5	Rated speed rpm : 500
Check tolerance	rack travel mm : 14 20
cm3/1000s. : 8.0	rack travel mm : 14.20 Tolerance mm : + 0.10
CIII	i e e e e e e e e e e e e e e e e e e e
	A Rated speed rom • 750
	I rack travel mm · 1/ 00
CONTROL LEVER	Tolerance mm · += 0.10
CONTROL LEVER	Rated speed rpm : 750 rack travel mm : 14.00 Tolerance mm : +- 0.10
aéntrol loyon	I
control lever	ANEROID/ALTITUDE
position degree : 103.0	+ COMPENSATOR TEST
tolerance degree : +- 4.0	T COMPENSATOR TEST
DATES COSES	T
RATED SPEED	T CETTING
	+ SETTING

Rated speed rpm	:	500
Pressure hPa	:	1000
rack travel mm	:	14.20
Tolerance mm	: -	⊢ 0.10

MEASUREMENT

Pressure hPa	:	_
Rated speed rpm	:	500
rack travel mm	:	13.50
Tolerance mm	: +	- 0.10

Rated	speed	rpm	:	500
-------	-------	-----	---	-----

Pressure hPa	:	250
rack travel mm	:	13.80
Tolerance mm	: +	- 0.05

FUEL DELIVERY CHARACTERISTICS

Anei	bion	pressure

hPa	:	1000
Rated speed rpm	:	750
Del. quantity		
cm3/1000 strokes	•	85.0

Tolerance

2.0 cm3/1000 strokes : +-Check tolerance

cm3/1000s.

Aneroid pressure

hPa Rated speed rpm : 500

Del. quantity cm3/1000 strokes : 69.5

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s.: +- 3.0

BREAKAWAY

Rack travel in mm : 12.00 Rated speed rpm : 1295 Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 1.00

Del. quantity

cm3/1000 strokes : 120.0

Tolerance

cm3/1000 strokes : + 7.5

Check tolerance

cm3/1000s. : **←** 10.0

LOW IDLE

Rated speed rpm : 325

Del. quantity cm3/1000 strokes : 14.5

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 08.07.96 Test oil : 190 /447

Combination No. : 0 402 066 702

Injection pump

Pump designation : PES6P110A120RS3336

: -1

EP type number : 0 412 016 751

Governor

Governer design. : RSV550...1100P2A586

: -1

Governer no.

: 0 421 833 480

Cust. part No. : 3926887

Customer-spec. information Customer : CDC Motor : 6CTA

Power KW

: 194.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance °C

: **←** 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

: 208.5

Tolerance bar : +- 1.5

Test Lines : 1 680 750 015

E12

Outside diameter : 6.0

x inside diameter :

3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Tolerance bar : +- 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 8.00

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel

: 15.00

Difference ° CS : 1.50

†	
BASIC SETTING	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 1100	Rated speed rpm : 1100 Aneroid pressure
Rack travel in mm : 14.25 Tolerance mm : + 0.05	hPa : 1500 Del. quantity cm3/1000 strokes : 187.0 Tolerance
Del. quantity cm3/1000 strokes : 187.0	cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0
Tolerance cm3/1000 strokes : +- 1.0	Spreed Tolerance cm3/1000 strokes : 8.0
Check tolerance cm3/1000s. : + 3.0	Check tolerance cm3/1000s. : 12.0
Spreed Tolerance cm3/1000 strokes : 8.0	CONTROL LEVER
Check tolerance cm3/1000s. : 12.0	<pre>control lever position degree : 96.0 tolerance degree : +- 4.0</pre>
Rated speed rpm : 550	RATED SPEED
Rack travel in mm: 5.10 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 26.5	rack travel mm : 13.25 Rated speed rpm : 1185 Tolerance 1/min : + 5
Tolerance + 2.0 + Check tolerance +	rack travel mm : 7.80 Rated speed rpm : 1235 Tolerance 1/min : +- 5
cm3/1000S. : +- 4.5 Spreed Tolerance	rack travel mm : 0.85 Tolerance mm : + 0.55
cm3/1000 strokes : 4.0 + Check tolerance cm3/1000s. : 6.5	Rated speed rpm : 1390
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
WITH GOVERNOR	<pre>control lever position degree : 67.5 tolerance degree : +- 4.0</pre>
GUIDE SLEEVE POSITION	Setting point w/out bumper spring
Rated speed rpm : 800 + Rack travel in mm : 0.50 +	Rated speed rpm : 550 rack travel mm : 4.60
Tolerance mm : +- 0.20 +- governor spring +-	Testing:
pre-tension click setting x : 3.00	Rated speed rpm : 550 rack travel mm : 5.10 Tolerance mm : +- 0.10

Rated speed rpm : 100

CRT mm min. : > 19.00

TORQUE CONTROL

Rated speed rpm : 1100 rack travel mm : 14.25 Tolerance mm : +- 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 1000 Pressure hPa : 1500

MEASUREMENT

Pressure hPa : Rated speed rpm : 1000
rack travel mm : 11.10
Tolerance mm : +- 0.20

Rated speed rpm : 1000

Pressure hPa : 995 rack travel mm : 13.45 Tolerance mm : + 0.20

Pressure hPa : 655 rack travel mm : 12.05 Tolerance mm : +- 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 1000
Del. quantity

cm3/1000 strokes : 122.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

BREAKAWAY

Rack travel in mm : 13.25 Rated speed rpm : 1185 Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 21.00 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 154.0 Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance cm3/1000s. : +- 25.0

LOW IDLE

Rated speed rpm : 550 Del. quantity

cm3/1000 strokes : 26.5

Tolerance

cm3/1000 strokes : + 2.0

Check tolerance cm3/1000s. :

cm3/1000S. : +- 4.5 Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance cm3/1000s. : 6.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 08.07.96 Test oil : ISO 4113

Combination No. : 0 400 196 003

Injection pump

Pump designation : PES6M60C320RS206 EP type number : 0 410 066 001

Governor

Governer design. : RE22

Governer no. : 0 420 090 004

Cust. part No. :

Customer-spec. information : MB-PKW Customer

: OM 606 D30 LA Motor

: 130.0 Power KW

TEST BENCH REQUIREMENTS

: 1.1; Inlet line

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0 Tolerance bar 0.1

Test nozzle holde

: 0 688 901 111 assembly

Opening pressure

148.5 Tolerance bar 1.5

: 1 680 750 014 Test lines

Outside diameter : 6.0 x inside diameter : 2.0 x length mm

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting. Setting of constant delivery under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 1.55 : + 0.05Tolerance mm Check

: **←** 0.10 tolerance mm

Rack travel in mm : 17.00 : +- 1.00 Tolerance mm

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

"NW after s.o.d. : 17.00 : +- 0.20 Tolerance Check

: +- 0.30 tolerance *NW

Barrel no. : 1

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

	1
TESTING & SETTING RACK TRAVEL SENSOR	<pre>+ Test with control rod + in stop position</pre>
POSITION	T m stop position
	+ Engine speed min-1: 60
Engine speed min-1: 0	+ Amplitude V : 1.4 + Tolerance V : +/- 0.6
	+ Tolerance V : +/- 0.6
Setting point	+ Check
(P, R and H pump)	tolerance V : +/- 1.20
Hact V . 3 100	+ Engine speed min-1: 600
Uact V : 3.100 CRT mm : 13.00	+ Difference
Tolerance mm : +/- 0.05	Amplitude to
Check	+ Amplitude V : max.1.4
tolerance mm : +/- 0.10	+
	†
Check value (P, R and H pump)	(C) INJECTION PUMP WITH POSITIONER
(P, R and m pump)	T (C) INDECTION FOR WITH POSITIONER
	TEST POINT V1
Uact V : 1.700	+
CRT mm : 6.15	Rated speed rpm : 1000
Tolerance mm : +/- 0.25	+ Uact V : 3.250
Check	+ Del. quantity
tolerance mm : +/- 0.30	cm3/1000 strokes : 60.0 Tolerance
	+ cm3/1000 strokes : +- 0.5
Setting point	+ Check tolerance
(M pump)	+ cm3/1000s. : + 2.0
	+ Spreed
Uact V : 3.100	+ Tolerance
CRT mm : 12.50	+ cm3/1000 strokes : 2.5
Tolerance mm : +/- 0.05	+ Check tolerance + cm3/1000s. : 3.0
Check tolerance mm : +/- 0.10	
coterarite inii : 17 o. 16	FUEL DELIVERY CHARACTERISTICS
Check value	+
(M pump)	+
	+ Rated speed rpm : 2200_
Uact V : 1.700	+ Uact V : 3.250
CRT mm : 5.50	+ Del. quantity + cm3/1000 strokes : 64.0
Tolerance mm : +/- 0.25 Check	+ cm3/1000 strokes : 64.0 + Check tolerance
tolerance mm : +/- 0.30	+ cm3/1000s. : +- 2.0
	Spreed
Stop position	+ Check tolerance
	+ cm3/1000s. : 3.5
Uact V : Value with	t Dated aread man . 500
deenergised adjusting magnet and control rod in	+ Rated speed rpm : 500 + Uact V : 3.250
stop position.	Del. quantity
CRT mm : 0.75	+ cm3/1000 strokes : 55.0
Tolerance mm : +/- 0.25	+ Check tolerance
Check	+ cm3/1000s. : + 2.0
tolerance mm : +/- 0.35	+ Spreed
	Check tolerance
CHICANIC COMED CENTOD	t cm3/1000s. : 3.0
ENGINE-SPEED SENSOR (All P and R pumps not	† TEST POINT L1
H and M pumps)	+
ir dire ir pumpoz	Rated speed rpm : 310

Uact V	:	1.950
Del. quantity cm3/1000 strokes	:	11.5
Tolerance cm3/1000 strokes Spreed	: +-	2.2
Tolerance cm3/1000 strokes	:	1.5
Check tolerance cm3/1000s.	:	2.0

STARTING FUEL DELIVERY

Rated speed rpm Uact V Del. quantity cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: +-	100 3.250 53.2 2.5	
Tolerance cm3/1000 strokes Check tolerance	:	8.0	
cm3/1000s.	:	8.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 05.07.96 : ISO 4113

Combination No. : 0 401 846 571

Injection pump

Pump designation : PE6P110A320RS856 EP type number : 0 411 816 170

Governor

Governer design. : RQV250...1150PA1313

Governer no. : 0 421 814 183

Cust. part No. : 836354722

Customer-spec. information Customer : SISU Motor : 612 DSI Power KW : 185.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : +- 2.0 Tolerance °C

Overflow valve : 1 417 413 025

1.5 Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : \leftarrow 1.0

Prestroke mm : 3.05 Tolerance mm : + 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

: +- 0.30 Tolerance

Check

: +- 0.50 tolerance °NW

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 12.05 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 140.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

E18

		+ Rated speed rpm	. 1710
Spreed		_ + Kated speed rpm	. 1312
Tolerance		Rack travel in mm	: 11.05
cm3/1000 strokes	: 4.0	+ Tolerance mm	
Ob. al. a. L		_	
Check tolerance cm3/1000s.	: 7.5	FULL LOAD DELIVERY	AT FULL LOAD STOR
CIIIS7 (DOOS.	. (.3	T FOLL LOAD DELIVERY	AT FULL LUAD STOP
Rated speed rpm	: 325	+ Rated speed rpm	: 700
		+ Aneroid pressure	
Barti Arrival du ma		† hPa	: 700
Rack travel in mm Tolerance mm		+ Del. quantity + cm3/1000 strokes	: 140.0
Del. quantity	5.10	+ Tolerance	. 140.0
cm3/1000 strokes	: 14.0		: + 1.0
Tolerance		+ Check tolerance	
cm3/1000 strokes	: +- 2.0		: +- 4.0
Check tolerance	: +- 4.5	+ Spreed	
cm3/1000s. Spreed	: +- 4.5	Tolerance cm3/1000 strokes	: 4.0
Tolerance		+ Check tolerance	. 7.0
cm3/1000 strokes	: 3.0	+ cm3/1000s.	: 7.5
Check tolerance		+	
cm3/1000s.	: 6.0	†	
		CONTROL LEVER	
(B) SETTING OF IN	NJECTION PUMP	+	
WITH GOVERNOR		+ control lever	
		+ position degree	
GUIDE SLEEVE TRAV	/EI	tolerance degree	: +- 4.0
GOIDE SEEENE IKAN	/	- control lever	
Rated speed rpm	: 325	+ position degree	: 115.0
guide sleeve		+ tolerance degree	: +- 4.0
travel mm	: 2.03	+	
Tolerance mm	: +- 0.20	† RATED SPEED	
Rated speed rpm	: 1207	rack travel mm	: 11.00
guide sleeve		+ Rated speed rpm	
travel mm		† Tolerance 1/min	: + 5
Tolerance mm	: +- 0.15	rack travel mm	* / OO
Rated speed rpm	: 800	+ Rated speed rpm	· 4.00 · 1295
guide sleeve	. 333	+ Tolerance 1/min	
travel mm	: 5.24	+	
Tolerance mm	: + 0.25	rack travel mm Tolerance mm Rated speed rpm	: 0.50
Rated speed rpm	: 460	+ lolerance mm	: +- 0.50 · 1/50
guide sleeve	. 400	T Kated speed ipili	. 1430
travel mm	: 3.08	1	
Tolerance mm	: + 0.25	+	
5 . 444	4/00	+ LOW IDLE	
Rated speed rpm	: 1490	Ī	
guide sleeve travel mm	: 11.50	control lever	
Tolerance mm	: +- 0.50	+ position degree	: 87.0
		tolerance degree	
CUINE OF SELECTION	TTON	†	
GUIDE SLEEVE POSI	ITUN	control leverposition degree	· 20 0
		1 posteron degree	,

tolerance degree	: + 4.0	+ Tolerance
Testing:		cm3/1000 strokes : + 1.5 Check tolerance
Rated speed rpm rack travel mm	: 6.20	cm3/1000s. : + 4.0
Tolerance mm	: + 0.10	+ BREAKAWAY
Rated speed rpm	: 100	Rack travel in mm : 11.00
CRT mm min. Rated speed rpm		Rated speed rpm : 1195 Tolerance 1/min : +- 5
Nated Speed 7 pm	. 473	-
TORQUE CONTROL		STARTING FUEL DELIVERY
Rated speed rpm rack travel mm Tolerance mm	: 12.05	Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 210.0
ANEROID/ALTITUDE COMPENSATOR TEST		Tolerance cm3/1000 strokes : +- 10.0 Check tolerance
SETTING		- cm3/1000s. : + 14.0
Rated speed rpm Pressure hPa rack travel mm	: 1000 : 12.05	LOW IDLE
Tolerance mm	: +- 0.05	+ Rated speed rpm : 325
MEASUREMENT		+ Del. quantity + cm3/1000 strokes : 14.0
Pressure hPa Rated speed rpm	: – : 500	Tolerance + cm3/1000 strokes : +- 2.0
rack travel mm Tolerance mm	: 10.40	+ Check tolerance + cm3/1000s. : +- 4.5 + Spreed
Rated speed rpm	: 500	Tolerance cm3/1000 strokes : 3.0
Pressure hPa rack travel mm Tolerance mm	: 270 : 10.80 : + 0.10	Check tolerance cm3/1000s. : 6.0
Pressure hPa rack travel mm Tolerance mm	: 415 : 11.65 : + 0.05	
		End of test specification sheet
FUEL DELIVERY CHA	RACTERISTICS	‡
Aneroid pressure		<u> </u>
nra Rated speed rpm Del. quantity	700	<u> </u>
cm3/1000 strokes	: 104.0	1

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 04.07.96 : ISO 4113

Combination No.

: 0 402 046 850

Injection pump

Pump designation : PES6P120A320RS3320

EP type number

: 0 412 026 763

Governor

Governer design. : RQV275...1000PA995

: -2

Governer no.

: 0 421 813 940

Cust. part No. : CCEP-5134 66-211

Customer-spec. information

: RENAULT V.I. Customer

: MIDR 063540 M/3 Motor

: 236.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C

: 2 417 413 071 Overflow valve

Inlet press. bar : 2.5

Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar

Tolerance bar

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 3.40

: + 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 19.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

: +- 0.50 tolerance °NW

Start of delivery mark

Tolerance : +-- 0.50

Check

tolerance *NW : +- 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 12.55

Tolerance mm :	: +- 0.05	+ Tolerance mm :	+- 0.20
6.1		†	707
Del. quantity	2/2.0		393
cm3/1000 strokes :	: 242.0	<pre>+ guide sleeve + travel mm :</pre>	2.99
Tologopoo			+- 0.20
Tolerance cm3/1000 strokes :	: 1.0	Toterance min .	+- 0.20
CIBS TOOU STrokes .	. — 1.0	Rated speed rpm :	490
Check tolerance		guide sleeve	470
	: +- 4.0	+ travel mm :	3.81
			+- 0.20
Spreed		+	
Tolerance		+ Rated speed rpm :	1370
cm3/1000 strokes :	: 5.0	+ guide sleeve	
		+ travel mm :	11.50
Check tolerance		+ Tolerance mm :	+- 0.50
cm3/1000s.	: 9.0	+	
	700	+	
Rated speed rpm :	: 300	+ GUIDE SLEEVE POSITI	UN
		Doted and and	1190
Rack travel in mm :	-7 40	Rated speed rpm :	1180
	: -7.40 : +- 0.10	Rack travel in mm:	11.40
Del. quantity		+ Tolerance mm :	
cm3/1000 strokes :	25.0	1000, 41100 1111	1.33
Tolerance			
cm3/1000 strokes :	: 2.0	+ FULL LOAD DELIVERY	AT FULL LOAD STOP
Check tolerance		+	
cm3/1000s. :	: +- 5.0	+ Rated speed rpm :	600
Spreed		+ Aneroid pressure	
Tolerance	0.0	+ hPa :	1000
cm3/1000 strokes :	: 8.0	+ Del. quantity	3/2 6
Check tolerance	: 12.0	+ cm3/1000 strokes :	242.0
cm3/1000s. :	12.0	+ Tolerance + cm3/1000 strokes :	+- 1.0
		Check tolerance	+- 1.0
(B) SETTING OF INJE	CTION PLIMP	· ·	+- 4.0
WITH GOVERNOR	2011014 1 0111	Spreed	4.0
WITH GOVERNOR		+ Tolerance	
-		+ cm3/1000 strokes :	5.0
GUIDE SLEEVE TRAVEL	_	+ Check tolerance	
		+ cm3/1000s. :	9.0
Rated speed rpm :	300	+	
guide sleeve	A	†	
travel mm :	1.66 +- 0.10	CONTROL LEVES	
Tolerance mm :		CONTROL LEVER	
Rated speed rpm :	1086	- control lever	
guide sleeve	1000	position degree :	306.0
travel mm :	8.46	tolerance degree :	
	+- 0.10	+	· · ·
· · · · · · · · · · · · · · · · · · ·		+ RATED SPEED	
Rated speed rpm :	773	+	
guide sleeve		+ rack travel mm :	-1 .00
travel mm :	6.09	+ Rated speed rpm :	1075
Tolerance mm :	+- 0.20	+ Tolerance 1/min :	+- 5
5	7/7	†	0 <i>EE</i>
Rated speed rpm :	343	+ rack travel mm :	-8.55 1195
guide sleeve	2.33	+ Rated speed rpm : + Tolerance 1/min :	+- 15
travel mm :	2.33	T Toterance //min :	(i)

rack travel mm Tolerance mm Rated speed rpm	: −11.95 : ← 0.55 : 1350	Pressure hPa rack travel mm Tolerance mm	: 280 : -0.75 : +- 0.05
		- START CUT-OUT	
LOW IDLE		Rated speed rpm Rated speed rpm	: > 100 : < 195
position degree tolerance degree		Check speed 1/min Check	: > 80
Testing:		speed 1/min	: < 215
Rated speed rpm rack travel mm Tolerance mm	: 300 : -7.40 : +- 0.10	FUEL DELIVERY CHAR	RACTERISTICS
Rated speed rpm	: 200	+ Aneroid pressure + hPa	: 1000
		+ Rated speed rpm	
CRT mm max.	: < -5.90	+ Del. quantity - cm3/1000 strokes	: 230.0
Rated speed rpm	: 365	+ Tolerance + cm3/1000 strokes	: +- 3.0
TORQUE CONTROL		- + Check tolerance + cm3/1000s.	: +- 6.0
Rated speed rpm	: 600	Aneroid pressure	
Rated speed rpm Tolerance mm	: 1000 : +- 0.10	+ hPa + Rated speed rpm + Del. quantity	: 1000 : 600
Rated speed rpm	: 600	cm3/1000 strokes Tolerance	: 114.0
rack travel mm	: -4.00	cm3/1000 strokes	: +- 5.0
Tolerance mm	: +- 0.10	- Check tolerance - cm3/1000s. - Spreed	: +- 8.0
ANEROID/ALTITUDE COMPENSATOR TEST		Tolerance cm3/1000 strokes	: 10.0
		+ Check tolerance + cm3/1000s.	: 14.0
SETTING		+ Aneroid pressure	
Rated speed rpm Pressure hPa	: 500 : 1000	+ hPa + Rated speed rpm	500
MEASUREMENT		Del. quantitycm3/1000 strokes	: 156.0
Pressure hPa	: -	+ Tolerance + cm3/1000 strokes	: +- 1.0
Rated speed rpm rack travel mm Tolerance mm	: 500 : -2.25 : +- 0.20	Check tolerance cm3/1000s.	: +- 4.0
Rated speed rpm	: 500	BREAKAWAY	
Pressure hPa rack travel mm Tolerance mm	: 160 : -1.70 : +- 0.10	Rack travel in mm Rated speed rpm	

Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Del. quantity

cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

300 Rated speed rpm :

Del. quantity cm3/1000 strokes : 25.0

Tolerance

cm3/1000 strokes : +-2.0

Check tolerance

cm3/1000s. 5.0

Spreed

Tolerance

8.0 cm3/1000 strokes :

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 02.07.96 Test oil : ISO 4113

Combination No. : 0 402 646 605

Injection pump

Pump designation : PE6P130A720RS7197 EP type number : 0 412 636 815

Governor

Governer design. : RQV300...1000PA946

: -2

Governer no.

: 0 421 814 021

Cust. part No. :

Customer-spec. information Customer : IVECO-UNIC
Motor : 8210.22.800

Motor

: 8210.22.800

Power KW

: 224.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

40

Tolerance °C

Overflow valve : 1 417 413 025

1.5

Inlet press. bar : Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 140 Tolerance l/h : +- 20.0

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

E25

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3
x length mm : 1000

3.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.05 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: **←** 0.30 Tolerance

Check

: +- 0.50 tolerance °NW

Start of delivery mark

: +- 0.10 Tolerance

Check

tolerance °NW : +- 0.50

Barrel no.

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 12.10

Tolerance mm : +- 0.05

ı	- Tolerance
Del. quantity cm3/1000 strokes : 217.0	- cm3/1000 strokes : 5.0
	- Check tolerance - cm3/1000s. : 8.0
Tolerance cm3/1000 strokes : +- 1.0	- -
Check tolerance cm3/1000s. : +- 4.0	- CONTROL LEVER
Spreed	- control lever - position degree : 116.0
Tolerance cm3/1000 strokes : 5.0	- tolerance degree : +- 4.0 -
Check tolerance	- RATED SPEED -
cm3/1000s. : 8.0	- rack travel mm : 11.10 - Rated speed rpm : 1045
Rated speed rpm : 300	- Tolerance 1/min : +- 5
Real Annual de mar y 5 10	- rack travel mm : 4.00 - Rated speed rpm : 1145
Rack travel in mm : 5.10 + Tolerance mm : +- 0.10 +	- Rated speed rpm : 1145 - Tolerance 1/min : +- 15
Del. quantity + cm3/1000 strokes : 20.0 +	- - rack travel mm : 0.50
Tolerance + 3.0	- Tolerance mm : +- 0.50 - Rated speed rpm : 1350
Check tolerance	rack travel mm : 4.00
Spreed	- rack travet mm : 4.00 -
Tolerance + cm3/1000 strokes : 8.0 +	
Check tolerance	- LOW IDLE
cm3/100US. : 12.U +	-
(B) SETTING OF INJECTION PUMP	- control lever - position degree : 64.0
WITH GOVERNOR	tolerance degree : +- 4.0
	Testing:
GUIDE SLEEVE POSITION	Rated speed rpm : 300
Rated speed rpm : 1130	rack travel mm : 5.10 Tolerance mm : + 0.10
Rack travel in mm: 10.90	Rated speed rpm : 100
Tolerance mm : +- 1.30	CRT mm min. : > 6.60
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 470
Rated speed rpm : 1000	TORQUE CONTROL
Aneroid pressure hPa : 900	
Del. quantity + cm3/1000 strokes : 217.0 +	Rated speed rpm : 1000 rack travel mm : 12.10
Tolerance cm3/1000 strokes : +- 1.0 +-	Tolerance mm : +- 0.05
Check tolerance	Rated speed rpm : 550
cm3/1000s. : +- 4.0 +- Spreed	rack travel mm : 12.15 Tolerance mm : +- 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 900
rack travel mm : 12.10
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 10.40
Tolerance mm : +- 0.20

Rated speed rpm : 500

Pressure hPa : 265 rack travel mm : 10.60 Tolerance mm : +- 0.10

Pressure hPa : 360 rack travel mm : 11.55 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 900 Rated speed rpm : 550 Del. quantity

cm3/1000 strokes : 221.0

Tolerance

cm3/1000 strokes : +- 3.0
Check tolerance
cm3/1000s. : +- 6.0

Aneroid pressure

hPa : Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 167.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm : 11.10

Rated speed rpm : 1045
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 240.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 300

Del. quantity

cm3/1000 strokes : 20.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 7.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 21.02.95 : ISO 4113

Combination No. : 0 402 646 625

Injection pump

Pump designation : PE6P120A320RS7300 EP type number : 0 412 626 886

Governor

Governer design. : RQV275...1000PA1077K

Governer no. : 0 421 815 358

Cust. part No. : 1280165

Customer-spec. information Customer : DAF Motor : WS 242 M Power KW : 242.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance $^{\circ}$ C : + 2.0

Overflow valve : 1 417 413 025

1.5 Inlet press. bar : Tolerance bar : +- 0.1

Overflow quantity

min. L/h : 140 Tolerance L/h : + 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 5.35 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 15.00 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance "NW : +- 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm : 15.05 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 228.0

Tolerance cm3/1000 strokes	: +- 1.0	+ Tolerance mm : +- 0.25 + Rated speed rpm : 400
Check tolerance cm3/1000s.	: +- 4.0	guide sleeve + travel mm : 3.92 + Tolerance mm : +- 0.25
Spreed Tolerance cm3/1000 strokes Check tolerance	: 5.0	Rated speed rpm : 1310 guide sleeve travel mm : 13.50 Tolerance mm : +- 0.50
cm3/1000s.	: 9.0	Totel drice man
Rated speed rpm	: 275	GUIDE SLEEVE POSITION
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: +- 0.10	Rated speed rpm : 1140 Rack travel in mm : 14.00 Tolerance mm : +- 1.30
Tolerance cm3/1000 strokes Check tolerance	: +- 3.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000S. Spreed Tolerance	: +- 6.0	Rated speed rpm : 980 Aneroid pressure hPa : -
cm3/1000 strokes Check tolerance		Del. quantity cm3/1000 strokes : 228.0
cm3/1000s.	: 12.0	+ Tolerance + cm3/1000 strokes : +- 1.0 + Check tolerance
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	- cm3/1000s. : +- 4.0 - Spreed - Tolerance
GUIDE SLEEVE TRAV	ÆL	cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Rated speed rpm guide sleeve travel mm		- CIIIS/1000S 9.0
Tolerance mm	: + 0.20	CONTROL LEVER
Rated speed rpm guide sleeve travel mm Tolerance mm	: 1045 : 9.83 : +- 0.15	control lever position degree : 119.0 tolerance degree : + 4.0 RATED SPEED
Rated speed rpm guide sleeve		rack travel mm : 14.00
travel mm Tolerance mm	: 6.43 : +- 0.25	Rated speed rpm : 1037 Tolerance 1/min : +- 5
Rated speed rpm guide sleeve travel mm Tolerance mm	: 2.27	rack travel mm : 4.00 Rated speed rpm : 1165 Tolerance 1/min : +- 15
Rated speed rpm guide sleeve travel mm	: 334 : 3.08	rack travel mm : 0.70 Tolerance mm : +- 0.70 Rated speed rpm : 1250

LOW IDLE	
control lever position degree tolerance degree	
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : 5.30 : +- 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 395 : + 20
Rated speed rpm	: 175
CRT mm min.	: > 8.50
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 980 : 15.05 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 850 : 14.95 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 750 : 14.95 : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 600 : 14.60 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 500 : 14.40 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 980 : 1500 : 15.05 : +- 0.05

Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 980 : 12.30 : +- 0.10
Rated speed rpm	: 980
Pressure hPa rack travel mm Tolerance mm	: 480 : 14.35 : +- 0.05
Pressure hPa rack travel mm Tolerance mm	: 270 : 12.90 : +- 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa	
Rated speed rpm Del. quantity	: 750
cm3/1000 strokes	: 238.0
Tolerance cm3/1000 strokes	: +- 2.0
Check tolerance cm3/1000S. Spreed	: +- 5.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
	. 12.0
Aneroid pressure hPa	: -
Rated speed rpm Del. quantity	: 600
cm3/1000 strokes Tolerance	: 157.0
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s.	: +- 4.0
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 1037

LOW IDLE

MEASUREMENT

Rated speed rpm	:	275	
Del. quantity			
cm3/1000 strokes	:	17.0	
Tolerance		7.0	
cm3/1000 strokes	: +-	3.0	
Check tolerance			
cm3/1000s.	; +-	6.0	
Spreed			
Tolerance		_	
cm3/1000 strokes	:	8.0	
Check tolerance			
cm3/1000s.	:	12.0	

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 04.07.96 Edition : ISO 4113 Test oil Combination No. : 0 402 646 650 Injection pump Pump designation : PE6P130A720RS7354 EP type number : 0 412 636 835 Governor Governer design. : RQV300...950PA1002 : -2K : 0 421 815 434 Governer no. Cust. part No. : Customer-spec. information : IVECO-FRANCE Customer : 8210.42.4000 Motor TEST BENCH REQUIREMENTS Inlet line : 4.2 Test oil inlet 40 temp. °C Tolerance °C 2.0 Overflow valve : 2 417 413 076 Inlet press. bar : 2.5 : +- 0.1 Tolerance bar Test nozzle holde : 1 688 901 105 assembly Opening pressure bar 208.5 Tolerance bar : +- 1.5 : 1 680 750 075 Test lines

8.0

Outside diameter :

F04

x inside diameter : x length mm : 1000 **REMARKS** (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values ____ BEGINNING OF DELIVERY Test pressure bar : 26.0 Tolerance bar : +- 1.0 Prestroke mm 5.05 : +- 0.05 Tolerance mm Check tolerance mm : +- 0.10 Rack travel in mm : 13.00 Tolerance mm : + 0.50 : 1-5-3-6-2-Firing order : 0-60-120-180-240 Phasing : -300 Tolerance : +- 0.30 Check tolerance °NW : +- 0.50 Start of delivery mark Check tolerance °NW : +- 0.40 Barrel no. : 1 BASIC SETTING Rated speed rpm 950 Rack travel in mm : 13.20 : +- 0.05 Tolerance mm Del. quantity cm3/1000 strokes : 274.0 Tolerance cm3/1000 strokes : +- 1.0

		+
Check tolerance cm3/1000s.	: +- 4.0	GUIDE SLEEVE POSITION
Spreed Tolerance cm3/1000 strokes	: 5.0	Rated speed rpm : 1185 Rack travel in mm : 12.00
Check tolerance	: 9.0	Tolerance mm : +- 1.30
Rated speed rpm		FULL LOAD DELIVERY AT FULL LOAD STOP
		Rated speed rpm : 950 Aneroid pressure
Rack travel in m Tolerance mm		hPa : 900 Del. quantity
Del. quantity cm3/1000 strokes Tolerance	: 35.0	+ cm3/1000 strokes : 274.0 + Tolerance + cm3/1000 strokes : +- 1.0
cm3/1000 strokes Check tolerance	: +- 3.0	Check tolerance cm3/1000s. : +- 4.0
cm3/1000s. Spreed	: +- 6.0	Spreed Tolerance
Tolerance cm3/1000 strokes Check tolerance	: 8.0	+ cm3/1000 strokes : 5.0 + Check tolerance + cm3/1000s. : 9.0
cm3/1000s.	: 12.0	
(B) SETTING OF IN	NJECTION PUMP	CONTROL LEVER control lever
GUIDE SLEEVE TRAN	/EL	+ position degree : 114.0 + tolerance degree : +- 4.0
Rated speed rpm guide sleeve		RATED SPEED
travel mm Tolerance mm	: 1.64 : +- 0.20	+ rack travel mm : 12.10 + Rated speed rpm : 995 + Tolerance 1/min : +- 5
Rated speed rpm guide sleeve	: 1007	rack travel mm : 4.00
travel mm Tolerance mm	: 8.73 : + 0.15	Rated speed rpm : 1110 Tolerance 1/min : +- 15
Rated speed rpm guide sleeve	: 756	rack travel mm : 0.50 Tolerance mm : + 0.50
travel mm Tolerance mm	: 6.16 : +- 0.25	Rated speed rpm : 1300
Rated speed rpm guide sleeve	: 500	LOW IDLE
travel mm Tolerance mm	: 3.78 : +- 0.25	+
Rated speed rpm guide sleeve	: 1340	<pre>control lever position degree : 69.0 tolerance degree : +- 4.0</pre>
travel mm Tolerance mm	: 13.50 : +- 0.50	Testing:

Rated speed rpm	: 275	+ Check
		speed 1/min : > 160
rack travel mm Tolerance mm	: +- 0.10	- Check
toterance mm	. 1 - 0.10	speed 1/min : < 240
Rated speed rpm	: 375	T Speed 1/11/11 : \ 240
TORQUE CONTROL		+ FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL		Aneroid pressure
Rated speed rpm	• 950	+ hPa : 900
rack travel mm	. 13 20	Rated speed rpm : 550
Tolerance mm	· +- 0.05	Del. quantity
TO CET GITCE TIATI	0.05	cm3/1000 strokes : 286.0
Peted speed rom	• 700	+ Tolerance
Rated speed rpm	: 12.75	cm3/1000 strokes : +- 3.0
rack travel mm Tolerance mm	: +- 0.10	Check tolerance
roterance mm	: +- 0.10	+ cm3/1000s. : +- 6.0
Datad annual ur-	. 550	- cm3/1000s. : +- 6.0
Rated speed rpm	. 220	T Annual management
rack travel mm	: 12.05	Aneroid pressure
Tolerance mm	: +- 0.10	+ hPa : -
	700	Rated speed rpm : 550
Rated speed rpm rack travel mm	: 300	+ Del. quantity
rack travel mm Tolerance mm	: 11.80	+ cm3/1000 strokes : 173.0
Tolerance mm	: +- 0.30	+ Tolerance
		+ cm3/1000 strokes : +- 1.0
ANEROID/ALTITUDE		+ cm3/1000s. : +- 4.0
COMPENSATOR TEST		+
		→ BREAKA₩AY
SETTING		+
		+
Rated speed rpm	: 950	† Rack travel in mm : 12.10
Pressure hPa		+ Rated speed rpm : 995
rack travel mm		+ Tolerance 1/min : +- 5
Tolerance mm	: +- 0.05	+
		†
MEASUREMENT		STARTING FUEL DELIVERY
Pressure hPa	• -	OTANIZATO TOLL VELIVENT
Rated speed rpm	950	Rated speed rpm : 100
rack travel mm		+ Del. quantity
Tolerance mm	: +- 0.40	- cm3/1000 strokes : 155.0
TOLET GITCE THIS	0.70	Tolerance
Rated speed rpm	: 950	cm3/1000 strokes : +- 15.0
varen sheen ubu	. 700	Check tolerance
December 500	: 320	+ cm3/1000s. : +- 19.0
Pressure hPa		T (1113/10003. 19.0
rack travel mm		†
Tolerance mm	: +- 0.20	†
Dunnauma LDn	. 410	T
Pressure hPa	: 610	LOUTNIE
rack travel mm	: 12.10	+ LOW IDLE
Tolerance mm	: +- 0.05	D-4-044 275
		+ Rated speed rpm : 275
		† Del. quantity
START CUT-OUT		+ cm3/1000 strokes : 35.0
		+ Tolerance
Rated speed rpm		+ cm3/1000 strokes : +- 3.0
Rated speed rpm	: < 220	+ Check tolerance
•		+ cm3/1000s. : +- 6.0
		•

Spreed
Tolerance
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 04.07.96

Test oil

: ISO 4113

Combination No. : 0 402 646 665

Injection pump

Pump designation : PE6P130A720RS7354

EP type number : 0 412 636 835

Governor

Governer design. : RQV300...950PA1002

: -3K

Governer no.

: 0 421 815 491

Cust. part No. :

Customer-spec. information

Customer

: IVECO-FRANCE

Motor

: 8210.42K.3000

TEST BENCH REQUIREMENTS

Inlet line

: 4.2

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve : 2 417 413 076

Inlet press. bar :

2.5

Tolerance bar

: +- 0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

208.5

Tolerance bar

: + 1.5

Test lines

: 1 680 750 075

Outside diameter :

8.0

F08

x inside diameter : 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +-

Prestroke mm 5.05

: + 0.05Tolerance mm

Check

: + - 0.10tolerance mm

Rack travel in mm: 12.00

Tolerance mm : +- 0.50

: 1-5-3-6-2-Firing order

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : + 0.30

Check

: +- 0.50 tolerance °NW

Start of delivery mark

Check

tolerance °NW : +- 0.40

Barrel no.

1

BASIC SETTING

Rated speed rpm :

950

Rack travel in mm : 12.05

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes :

244.0

Tolerance

cm3/1000 strokes : +- 1.0

	+
Check tolerance cm3/1000s. : +- 4.0	GUIDE SLEEVE POSITION
Spreed -	Rated speed rpm : 1190
cm3/1000 strokes : 5.0	Rack travel in mm : 11.00 Tolerance mm : +- 2.70
Check tolerance cm3/1000s. : 9.0	
Rated speed rpm : 275	FULL LOAD DELIVERY AT FULL LOAD STOP
	Rated speed rpm : 950 Aneroid pressure
Rack travel in mm: 5.40 - Tolerance mm: + 0.10 -	hPa : 1000 Del. quantity
Del. quantity - cm3/1000 strokes : 35.0 -	cm3/1000 strokes : 244.0 Tolerance
Tolerance - cm3/1000 strokes : +- 3.0 -	cm3/1000 strokes : + 1.0 Check tolerance
Check tolerance cm3/1000s. : + 6.0	cm3/1000s. : +- 4.0 Spreed
Spreed - Tolerance -	Tolerance cm3/1000 strokes : 5.0
cm3/1000 strokes : 8.0 - Check tolerance - 13.6	Check tolerance cm3/1000s. : 9.0
cm3/1000s. : 12.0 -	
(B) SETTING OF INJECTION PUMP - WITH GOVERNOR -	CONTROL LEVER
	control lever position degree : 114.0
GUIDE SLEEVE TRAVEL	tolerance degree : +- 4.0
Rated speed rpm : 300 - guide sleeve	RATED SPEED
travel mm : 1.64 Tolerance mm : +- 0.20	rack travel mm : 11.00 Rated speed rpm : 1015
Rated speed rpm : 1025	Tolerance 1/min : +- 5
guide sleeve 7 travel mm : 9.00	rack travel mm : 4.00 Rated speed rpm : 1115
Tolerance mm : + 0.15	Tolerance 1/min : +- 15
Rated speed rpm : 764 - guide sleeve	rack travel mm : 0.50 Tolerance mm : +- 0.50
travel mm : 6.22 - Tolerance mm : + 0.25 -	Rated speed rpm : 1250
Rated speed rpm : 500	
guide sleeve travel mm : 3.78	LOW IDLE
Tolerance mm : +- 0.25	- control lever
Rated speed rpm : 1330	- position degree : 69.0
guide sleeve	tolerance degree : +- 4.0
travel mm : 13.50 Tolerance mm : + 0.50	- tolerance degree : +- 4.0 - - Testing:

Rated speed rpm	: 275	+
rack travel mm	: 5.40	Rated speed rpm : > 180 Rated speed rpm : < 220
Tolerance mm		+ Rated speed rpm : < 220
		- ' '
Rated speed rpm	: 200	+ Check
, ,		+ speed 1/min : > 160
CRT mm min.	: > 6.20	+ Check
		+ speed 1/min : < 240
Rated speed rpm	: 355	+
,		+
		FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL		+
		+ Aneroid pressure
Rated speed rpm	: 950	+ hPa : 1000
rack travel mm		+ Rated speed rpm : 550
Tolerance mm	: +- 0.05	+ Del. quantity
		+ cm3/1000 strokes : 264.0
Rated speed rpm	: 700	+ Tolerance
rack travel mm	: 11.85	+ cm3/1000 strokes : $+$ 3.0
Tolerance mm	: +- 0.10	+ Check tolerance
		+ cm3/1000s. : $+$ 6.0
Rated speed rpm	: 550	+
rack travel mm	: 11.40	+ Aneroid pressure
Tolerance mm	: +- 0.10	† hPa : -
		Rated speed rpm : 550
Rated speed rpm		† Del. quantity
rack travel mm		- cm3/1000 strokes : 174.0
Tolerance mm	: +- 0.30	+ Tolerance
		+ cm3/1000 strokes : +- 1.0
		+ Check tolerance
ANEROID/ALTITUDE		+ cm3/1000s. : +- 4.0
COMPENSATOR TEST		+
		+ BREAKAWAY
SETTING		†
	050	11.00
Rated speed rpm		+ Rack travel in mm : 11.00
Pressure hPa	: 1000	+ Rated speed rpm : 1015
rack travel mm	: 12.05	Tolerance 1/min : + 5
Tolerance mm	: +- 0.05	†
******		†
MEASUREMENT		STABLING FUEL NELTWERY
5		+ STARTING FUEL DELIVERY
Pressure hPa	950	Rated speed rpm : 100
Rated speed rpm	: 950 : 8.40	+ rack travel mm : 20.25
rack travel mm	: 0.40	•
Talamana mm		Tolopopeo mm
Tolerance mm	: +- 0.40	† Tolerance mm : +- 0.75
	: +- 0.40	+ Del. quantity
Tolerance mm Rated speed rpm		Del. quantity cm3/1000 strokes : 160.0
Rated speed rpm	: +- 0.40 : 950	Del. quantity - cm3/1000 strokes : 160.0 - Tolerance
Rated speed rpm Pressure hPa	: +- 0.40 : 950 : 290	Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : +- 15.0
Rated speed rpm Pressure hPa rack travel mm	: +- 0.40 : 950 : 290 : 9.35	Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance
Rated speed rpm Pressure hPa	: +- 0.40 : 950 : 290	Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : +- 15.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: + 0.40 : 950 : 290 : 9.35 : + 0.20	Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa	: + 0.40 : 950 : 290 : 9.35 : + 0.20 : 500	Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm	: + 0.40 : 950 : 290 : 9.35 : + 0.20 : 500 : 11.10	Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa	: + 0.40 : 950 : 290 : 9.35 : + 0.20 : 500	Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance cm3/1000s. : +- 19.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm	: + 0.40 : 950 : 290 : 9.35 : + 0.20 : 500 : 11.10	Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm	: + 0.40 : 950 : 290 : 9.35 : + 0.20 : 500 : 11.10	Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : +- 15.0 Check tolerance cm3/1000s. : +- 19.0

Del. quantity		75.0
cm3/1000 strokes Tolerance	:	35.0
cm3/1000 strokes	: +-	3.0
Check tolerance		
cm3/1000s.	: +-	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	•	12.0
Ciliar focos.	•	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 28.06.96 Edition : ISO 4113 Test oil

Combination No. : 0 402 646 670

Injection pump

Pump designation : PE6P120A320RS7421 EP type number : 0 412 626 956

Governor

Governer design. : RQV275...1150PA1296K Governer no. : 0 421 815 523

Cust. part No. : 1316183

Customer-spec. information Customer : DAF : PF 230 M Motor : 230.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 000

1.5 Inlet press. bar : Tolerance bar : +- 0.1

Overflow quantity

min. L/h : 150 Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 : +- 1.5 Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

26.0 Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : Tolerance mm : + 4.85 : +- 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 : +- 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

Tolerance : +- 0.10

Check

: +- 0.75 tolerance °NW

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1130

Rack travel in mm : 13.00 Tolerance mm : +- 0.05

Del. quantity	+ Rated speed rpm : 1480
cm3/1000 strokes : 228.0	+ guide sleeve
	+ travel mm : 13.50
Tolerance	+ Tolerance mm : + 0.50
cm3/1000 strokes : +- 1.0	T rocer ance initi
cms/ todu strokes : +- 1.0	Ť
	OUTS OF STATE PROTECTION
Check tolerance	+ GUIDE SLEEVE POSITION
cm3/1000s. : +- 4.0	+
	+ Rated speed rpm : 1321
Spreed	+
Tolerance	+ Rack travel in mm : 12.25
cm3/1000 strokes : 5.0	+ Tolerance mm : +- 1.30
Check tolerance	
cm3/1000s. : 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
CIID7 10003 7.0	TOLL LOAD DELIVERY AT TOLL LOAD STOP
Rated speed rpm : 275	Rated speed rpm : 1130
Rated speed rpm : 275	
	Aneroid pressure
	+ hPa : 1500
Rack travel in mm : 5.00	+ Del. quantity
Tolerance mm : +- 0.10	+ cm3/1000 strokes : 228.0
Del. quantity	† Tolerance
cm3/1000 strokes : 16.0	+ cm3/1000 strokes : +- 1.0
Tolerance	+ Check tolerance
cm3/1000 strokes : +- 3.0	+ cm3/1000s. : +- 4.0
Check tolerance	Spreed
cm3/1000s. : +- 6.0	+ Tolerance
Spreed	+ cm3/1000 strokes : 5.0
·	Check tolerance
Tolerance	
cm3/1000 strokes : 8.0	+ cm3/1000S. : 9.0
Check tolerance	+
cm3/1000s. : 12.0	+
	+
	+ CONTROL LEVER
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	+ control lever
	position degree : 119.0
	+ tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	_
www.w.w.wama.com.com/creasure	RATED SPEED
Rated speed rpm : 275	1
guide sleeve	rack travel mm : 12.00
	•
travel mm : 1.71	+ Rated speed rpm : 1190 + Tolerance 1/min : +- 5
Tolerance mm : + 0.20	+ Toterance Thirm : +- 3
4004	T
Rated speed rpm : 1201	rack travel mm : 4.00
guide sleeve	+ Rated speed rpm : 1315
travel mm : 10.07	+ Tolerance 1/min : + 15
Tolerance mm : +- 0.15	+
	+ rack travel mm : 0.70
Rated speed rpm : 811	+ Tolerance mm : +- 0.70
guide sleeve	Rated speed rpm : 1450
travel mm : 6.79	
Tolerance mm : +- 0.25	1
TOTAL BUILT	
Ostad amend man . /FO	T LOW TOLE
Rated speed rpm : 450	+ LOW IDLE
guide sleeve	†
travel mm : 3.85	†
Tolerance mm : +- 0.25	+ control lever
	+ position degree : 70.0

tolerance degree	: ← 4.0	∔ Rated	d speed rpm	: 875
•		rack	travel mm rance mm	: 9.05
Testing:		foler	rance mm	: +- 0.70
Rated speed rpm	: 275	Rated	d speed rpm	: 875
rack travel mm Tolerance mm	: 5.00	+		
Tolerance mm	: ← 0.10	+ Press	sure hPa	: 490 : 11.50
~	475	† rack	sure hPa travel mm rance mm	: 11.50
Rated speed rpm	: 175	Toler	rance mm	: +- 0.05
CRT mm min.	: > 7.60	Press	sure hPa	: 210
		+ rack	travel mm	: 9.45
Rated speed rpm	: 330	+ Toler	rance mm	: +- 0.10
TORQUE CONTROL		Į		
		+		
Rated speed rpm	: 1130	† FUEL	DELIVERY CHA	RACTERISTICS
rack travel mm	: 13.00	† ,,,,,		
Tolerance mm	: +- 0.05	l 1. D -	oid pressure	: 1500
Rated speed rpm	• 1000	T III A	d speed rpm	· 850
rack travel mm	· 13.10	+ nPa + Rated Del. + cm3/1 + Toler - cm3/1 + Spree + Toler - cm3/1 + check - cm3/1 + Anero hPa Rated	quantity	. 0,0
rack travel mm Tolerance mm	: +- 0.10	- cm3/1	1000 strokes	: 252.0
, , , , , , , , , , , , , , , , , , , ,		+ Toler	rance	
Rated speed rpm	: 850	+ cm3/1	1000 strokes	: +- 2.0
rack travel mm Tolerance mm	: 13.20	+ Check	< tolerance	
Tolerance mm	: +- 0.05	+ cm3/1	1000s.	: +- 5.0
Datad award awa	. 000	+ Spree	ea rance	
Rated speed rpm rack travel mm	: 000 : 17 00	+ 10(er	1000 strokes	8.0
Tolerance mm	· +- 0.10		tolerance	. 0.0
		+ cm3/1	1000s.	: 12.0
Rated speed rpm rack travel mm Tolerance mm	: 650	+		
rack travel mm	: 12.30	+ Anero	oid pressure	
Tolerance mm	: +- 0.10	† hPa		: -
		+ Rated	d speed rpm	: 600
Rated speed rpm		f Del.	quantity	. 4/7.0
rack travel mm			1000 strokes	: 167.0
Tolerance mm	: +- 0.10	+ Toler + cm3/1	rance 1000 strokes	· +- 1.0
Rated speed rpm	: 1150		tolerance	1.0
			1000s.	: +- 4.0
rack travel mm Tolerance mm	: +- 0.10	+ Spree	ed	
		+ Toler		
			1000 strokes	: 8.0
ANEROID/ALTITUDE			tolerance	: 12.0
COMPENSATOR TEST		Ī cm3/1	1000s.	: 12.0
		 		
SETTING		+ BREAK	CAWAY	
	A75	†		
Rated speed rpm		† n!	travel in mm	. 12.00
Pressure hPa	: 1500 : 13.45		travet in mm speed rpm	
rack travel mm Tolerance mm	: +- 0.10		rance 1/min	
TOLET GITCE THIS	0.10	1	G.100 1/10111	•
MEASUREMENT		+		
		+		
Pressure hPa	: -	+		

LOW IDLE

275 Rated speed rpm Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000S. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance 12.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 02.07.96 Test oil : ISO 4113

Combination No. : 0 402 648 790

Injection pump

Pump designation: PE8P130A920/5LS7867

EP type number : 0 412 638 805

Governor

Governer design. : RQV400...1000PA1285

Governer no. : 0 421 814 177

Cust. part No. :

Customer-spec. information

Customer : IVECO-FIAT Motor : 8285.22.014

Power KW : 277.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 135 Tolerance l/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.15 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.00 Tolerance mm : + 0.50

Firing order : 1-8-4-3-6 :-5-7-2

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : + 0.30

Check

tolerance °NW : + 0.50

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance *NW : +- 0.50

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 550

Rack travel in mm : 10.25 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 188.0	+ Rated speed rpm : 1320 + guide sleeve + travel mm : 11.50
Tolerance cm3/1000 strokes : + 1.0	Tolerance mm : + 0.50
Check tolerance cm3/1000s. : + 4.0	GUIDE SLEEVE POSITION
Spreed	Rated speed rpm : 1220
Tolerance cm3/1000 strokes : 8.0	Rack travel in mm : 8.00 Tolerance mm : + 2.70
Check tolerance cm3/1000s. : 12.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 400	Rated speed rpm : 550 Aneroid pressure hPa : 900
Rack travel in mm : 4.30	+ Del. quantity
Tolerance mm : +- 0.10 Del. quantity	+ cm3/1000 strokes : 188.0 + Tolerance
cm3/1000 strokes : 23.0	+ cm3/1000 strokes : +- 1.0
Tolerance cm3/1000 strokes : +- 3.0	+ Check tolerance + cm3/1000s. : + 4.0
Check tolerance cm3/1000s. : +- 7.0	+ Spreed
Spreed	+ Tolerance + cm3/1000 strokes : 8.0
Tolerance	Check tolerance
cm3/1000 strokes : 6.0 Check tolerance	+ cm3/1000s. : 12.0
cm3/1000s. : 10.0	+
	+ CONTROL LEVER
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	<pre>+ control lever + position degree : 114.0</pre>
	tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	+ + RATED SPEED
Rated speed rpm : 400	+ KATED SPEED
guide sleeve	rack travel mm : 9.20
travel mm : 1.90 Tolerance mm : +- 0.20	+ Rated speed rpm : 1070 + Tolerance 1/min : +- 5
	+
Rated speed rpm : 1080 guide sleeve	+ rack travel mm : 4.00 + Rated speed rpm : 1160
travel mm : 8.57	+ Tolerance 1/min : + 15
Tolerance mm : +- 0.15	0.50
Rated speed rpm : 764	+ rack travel mm : 0.50 + Tolerance mm : +- 0.50
guide sleeve	Rated speed rpm : 1250
travel mm : 5.74 Tolerance mm : +- 0.25	‡
Rated speed rpm : 520 guide sleeve	LOW IDLE
travel mm : 3.66	+
Tolerance mm : +- 0.25	<pre>+ control lever + position degree : 65.0</pre>

tolerance degree : +- 4.0 Testing:	+ Check + speed 1/min :> 80
Rated speed rpm : 400 rack travel mm : 4.30 Tolerance mm : + 0.10	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 900
Rated speed rpm : 300	Rated speed rpm : 950 Del. quantity
CRT mm min. :> 5.80	cm3/1000 strokes : 185.0
Rated speed rpm : 430	cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0
TORQUE CONTROL	+
Rated speed rpm : 550 rack travel mm : 10.25 Tolerance mm : + 0.05	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity
Rated speed rpm : 950 rack travel mm : 10.20 Tolerance mm : +- 0.10	- cm3/1000 strokes : 157.0 - Tolerance - cm3/1000 strokes : +- 1.0 - Check tolerance - cm3/1000s. : +- 4.0
ANEROID/ALTITUDE COMPENSATOR TEST	BREAKAWAY
SETTING Rated speed rpm : 500 Pressure hPa : 900 rack travel mm : 10.25 Tolerance mm : +- 0.05	Rack travel in mm: 9.20 Rated speed rpm: 1070 Tolerance 1/min: +- 5
Tolerance mm : +- 0.05 MEASUREMENT	STARTING FUEL DELIVERY
Pressure hPa : - Rated speed rpm : 500 rack travel mm : 9.40 Tolerance mm : + 0.20	+ Rated speed rpm : 100 + Del. quantity + cm3/1000 strokes : 150.0 + Tolerance + cm3/1000 strokes : +- 15.0
Rated speed rpm : 500	Check tolerance cm3/1000s. : +- 19.0
Pressure hPa : 330 rack travel mm : 9.60 Tolerance mm : +- 0.10	+
Pressure hPa : 355 rack travel mm : 10.05 Tolerance mm : +- 0.05	+ LOW IDLE + Rated speed rpm : 400 - Del. quantity - cm3/1000 strokes : 23.0
START CUT-OUT	Tolerance cm3/1000 strokes : +- 3.0 Check tolerance
Rated speed rpm : > 100	cm3/1000s. : +- 7.0 + Spreed

Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 30.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 09.07.96 Test oil : ISO 4113

Combination No. : 0 402 670 811

Injection pump

Pump designation : PE12P12OA52O/5RS7385

EP type number : 0 412 620 846

Governor

Governer design. : RSUV300...1150P0A364

Governer no. : 0 421 829 112

Cust. part No. : 12277646KY0120-17

Customer-spec. information Customer : MWM

Motor : TBD 616-V12

Power KW : 648.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

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x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.65 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 13.00Tolerance mm : +0.50

Firing order : 1-2-9-10-5-6

: - 11- 12- 3- 4

: - 7- 8

Phasing : 0-30-60-90-120-150

: -180-210-240-270

: -300-330

Tolerance : \leftarrow 0.30

Check

tolerance °NW : +- 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 12.60 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 262.0

Tolerance cm3/1000 strokes : +- 1.0

m3/1000 strokes : +- 1.0

Check tolerance	
cm3/1000s. : +- 4.0	CONTROL LEVER
Spreed	
Tolerance + cm3/1000 strokes : 6.0 +	control lever position degree : 113.0
	tolerance degree : +- 4.0
Check tolerance + cm3/1000s. : 9.0 +	RATED SPEED
+	
Rated speed rpm : 300	rack travel mm : 11.60 Rated speed rpm : 1193
+	Tolerance 1/min : +- 5
Rack travel in mm : 6.40 + Tolerance mm : + 0.10 +	rack travel mm : 4.00
Tolerance mm : +- 0.10 +- Del. quantity +-	Rated speed rpm : 1270
cm3/1000 strokes : 38.0	Tolerance 1/min : +- 15
Tolerance + 7.0	
cm3/1000 strokes : +- 3.0 +- Check tolerance	rack travel mm : 1.00 Tolerance mm : + 0.70
cm3/1000s. : + 6.0	Rated speed rpm : 1380
Spreed	
Tolerance + cm3/1000 strokes : 8.0 +	rack travel mm : 4.00 Rated speed rpm : 1280
Check tolerance	Rated speed i pill . 1200
cm3/1000s. : 12.0	
İ	LOW IDLE
(B) SETTING OF INJECTION PUMP	LOW IDEE
WITH GOVERNOR +	
†	control lever position degree : 74.0
	tolerance degree : +- 4.0
GUIDE SLEEVE POSITION +	-
Rated speed rpm : 800	Setting point w/out bumper spring
Rated speed rpm : 800 +	Rated speed rpm : 300
Rack travel in mm : 0.50	rack travel mm : 5.90
Tolerance mm : \leftarrow 0.20	Testing:
	resting.
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 300
Rated speed rpm : 1150 +	rack travel mm : 6.40 Tolerance mm : +- 0.10
Aneroid pressure	
hPa : 1800 +	rack travel mm : 2.00
Del. quantity + cm3/1000 strokes : 262.0 +	Rated speed rpm : 450 Tolerance 1/min : +- 30
cm3/1000 strokes : 262.0 + Tolerance +	Toterance Minnt . 1- 50
cm3/1000 strokes : +- 1.0 +	
Check tolerance + 4.0 +	TORQUE CONTROL
cm3/1000S. : + 4.0 + Spreed	Rated speed rpm : 1150
Tolerance +	rack travel mm : 12.60
cm3/1000 strokes : 6.0	Tolerance mm : +- 0.05
Check tolerance + cm3/1000s. : 9.0 +	
	Rated speed rpm : 800
+	Rated speed rpm : 800 rack travel mm : 12.60 Tolerance mm : +- 0.10

Rated speed rpm	500	+ Check tolerance
rack travel mm Tolerance mm	: 12.60 : +- 0.10	+ cm3/1000s. : + 4.0 + Spreed
		† Tolerance
ANEROID/ALTITUDE		cm3/1000 strokes : 6.0 Check tolerance
COMPENSATOR TEST		cm3/1000s. : 12.0
SETTING		BREAKAWAY
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1800	Rack travel in mm : 11.60 Rated speed rpm : 1193 Tolerance 1/min : +- 5
MEASUREMENT		<u> </u>
Pressure hPa	: -	STARTING FUEL DELIVERY
Rated speed rpm rack travel mm		Rated speed rpm : 100
Tolerance mm	: + 0.10	+ rack travel mm : 16.00
Rated speed rpm	: 600	Tolerance mm : +- 0.50 Del. quantity
•		+ cm3/1000 strokes : 347.0
Pressure hPa rack travel mm	: 780 : 9.60	+ Tolerance + cm3/1000 strokes : +- 14.0
Tolerance mm	· + 0.10	+ Check tolerance
D	. 4/00	+ cm3/1000s. : +- 20.0
Pressure hPa rack travel mm	: 1600 : 12.45	‡
Tolerance mm	: +- 0.05	†
		LOW IDLE
		Rated speed rpm : 300
FUEL DELIVERY CHA	ARACTERISTICS	<pre>pel. quantity cm3/1000 strokes : 38.0</pre>
Aneroid pressure	. 1000	Tolerance
hPa Rated speed rpm	: 1800 : 800	<pre>+ cm3/1000 strokes : +- 3.0 + Check tolerance</pre>
Del. quantity		cm3/1000s. : +- 6.0
cm3/1000 strokes Tolerance	: 261.0	+ Spreed + Tolerance
cm3/1000 strokes	: +- 3.0	+ cm3/1000 strokes : 8.0
Check tolerance cm3/1000s.	: +- 6.0	+ Check tolerance + cm3/1000s. : 12.0
Spreed		+
Tolerance cm3/1000 strokes	: 8.0	<u> </u>
Check tolerance		+
cm3/1000s.	: 12.0	
Aneroid pressure	: -	End of test specification sheet
Rated speed rpm	500	+
Del. quantity cm3/1000 strokes	: 131.0	‡
Tolerance cm3/1000 strokes	: +- 1.0	Į

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 09.07.96 Edition : ISO 4113 Test oil

Combination No. : 0 402 678 829

Injection pump

Pump designation : PE8P12OA52O/5RS7384

EP type number : 0 412 628 909

Governor

Governer design. : RSUV300...1150P0A364

: 0 421 829 112 Governer no.

Cust. part No. : 12277644KY0120-17

Customer-spec. information : MWM Customer

: TBD 616 V8 Motor Power KW : 432.0

TEST BENCH REQUIREMENTS

: 3.1 Inlet line

Test oil inlet

40 temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

1.5 Inlet press. bar : : +- 0.1 Tolerance bar

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

208.5 har : +- 1.5 Tolerance bar

: 1 680 750 075 Test lines

8.0 Outside diameter :

x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 4.65 : +- 0.05 Tolerance mm

Check

: + - 0.10tolerance mm

Rack travel in mm : 13.00 Tolerance mm : \leftarrow 0.50

Firing order : 1-8-5-4-7

: - 2- 3- 6

: 0-30-90-120-180 Phasing

: -210-270-300

: +- 0.30 Tolerance

Check

tolerance °NW : +~ 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 12.60 : + 0.05 Tolerance mm

Del. quantity cm3/1000 strokes : 262.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

: +- 4.0 cm3/1000s.

		1
Spreed Tolerance cm3/1000 strokes	: 6.0	control lever position degree : 115.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s.	: 9.0	RATED SPEED
Rated speed rpm	: 300	rack travel mm : 11.60 Rated speed rpm : 1193 Tolerance 1/min : + 5
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: + 0.10	rack travel mm : 4.00 Rated speed rpm : 1270 Tolerance 1/min : +- 15
Tolerance cm3/1000 strokes Check tolerance cm3/1000S.		rack travel mm : 1.00 Tolerance mm : + 0.70 Rated speed rpm : 1380
Spreed Tolerance cm3/1000 strokes Check tolerance		rack travel mm : 4.00 Rated speed rpm : 1285
cm3/1000s.	: 12.0	LOW IDLE
(B) SETTING OF IN	JECTION PUMP	control lever position degree : 78.0 tolerance degree : +- 4.0
GUIDE SLEEVE POST	TION	Setting point w/out bumper spring
Rated speed rpm		Rated speed rpm : 300 rack travel mm : 5.90
Rack travel in mm Tolerance mm		Testing:
	Y AT FULL LOAD STOP	Rated speed rpm : 300 + rack travel mm : 6.40 + Tolerance mm : + 0.10
Rated speed rpm Aneroid pressure hPa Del. quantity cm3/1000 strokes	: 1800	rack travel mm : 2.00 Rated speed rpm : 450 Tolerance 1/min : + 30
Tolerance cm3/1000 strokes		TORQUE CONTROL
Check tolerance cm3/1000S. Spreed Tolerance	: +- 4.0	Rated speed rpm : 1150 rack travel mm : 12.60 Tolerance mm : + 0.05
cm3/1000 strokes Check tolerance cm3/1000s.	: 6.0 : 9.0	Rated speed rpm : 800 rack travel mm : 12.60 Tolerance mm : +- 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 600
Pressure hPa : 1800
rack travel mm : 12.60
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 600
rack travel mm : 8.50
Tolerance mm : +- 0.10

Rated speed rpm : 600

Pressure hPa : 780 rack travel mm : 9.60 Tolerance mm : +- 0.20

Pressure hPa : 1600 rack travel mm : 12.45 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 1800 Rated speed rpm 800 Del. quantity cm3/1000 strokes : 261.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0

Check tolerance cm3/1000s. : 12.0

Aneroid pressure

hPa : Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 131.0
Tolerance
cm3/1000 strokes : +- 1.0
Check tolerance

: +-

4.0

Spreed

cm3/1000s.

Tolerance

cm3/1000 strokes : 6.0 Check tolerance

cm3/1000s. : 12.0

BREAKAWAY

Rack travel in mm : 11.60
Rated speed rpm : 1193
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 16.20 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 347.0 Tolerance cm3/1000 strokes : +- 14.0 Check tolerance cm3/1000s. : +- 20.0

LOW IDLE

Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 38.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000S. : +-6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance 12.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 02.07.96 Test oil : ISO 4113

Combination No. : 0 402 746 607

Injection pump

Pump designation : PES6P120A720RS7409

EP type number : 0 412 726 956

Governor

Governer design. : RQV450...1100PA1270

Governer no. : 0 421 814 172

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE : 8465.41.014 Motor

: 190.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5

Overflow quantity

min. l/h : 185 Tolerance l/h : +- 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.15 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : +- 0.50

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance °NW : +- 0.50

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 10.90

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes	: 168.0
Tolerance cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	: +- 4.0
Spreed Tolerance cm3/1000 strokes	: 5.0
Check tolerance cm3/1000s.	: 9.0
Rated speed rpm	: 450
Rack travel in mm Tolerance mm Del. quantity	5.30 + 0.10
cm3/1000 strokes	: 22.0
Tolerance cm3/1000 strokes	: +- 3.0
Check tolerance cm3/1000s. Spreed	: +- 6.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
(B) SETTING OF IN WITH GOVERNOR	UECTION PUMP
GUIDE SLEEVE TRAV	EL
Rated speed rpm guide sleeve	: 450
travel mm Tolerance mm	: 2.71 : +- 0.20
Rated speed rpm guide sleeve	: 1164
travel mm Tolerance mm	: 7.81 : + 0.15
Rated speed rpm guide sleeve	: 856
travel mm Tolerance mm	: 5.85 : +- 0.25
Rated speed rpm	: 580
guide sleeve travel mm Tolerance mm	: 3.81 : + 0.25

Rated speed rpm guide sleeve	: 1550
travel mm Tolerance mm	: 11.50 : +- 0.50
GUIDE SLEEVE POSI	TION
Rated speed rpm	: 1400
Rack travel in mm Tolerance mm	: 8.40 : +- 2.70
FULL LOAD DELIVER	Y AT FULL LOAD STOP
Rated speed rpm Aneroid pressure	: 1100
hPa	: 900
Del. quantity cm3/1000 strokes	: 168.0
Tolerance cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	: +- 4.0
Spreed Tolerance	
cm3/1000 strokes Check tolerance	: 5.0
cm3/1000s.	: 9.0
CONTROL LEVER	
control lever position degree tolerance degree	: 121.0 : +- 4.0
RATED SPEED	
rack travel mm Rated speed rpm Tolerance 1/min	: 9.90 : 1150 : +- 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1270 : +- 15
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1550

control lever position degree tolerance degree	: 70.0 : +- 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 450 : 5.30 : + 0.10
Rated speed rpm	: 350
CRT mm min.	: > 6.80
Rated speed rpm	: 430
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 10.90 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 10.95 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 700 : 900 : 10.90 : +- 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 700 : 10.20 : +- 0.20
Rated speed rpm	: 700
Pressure hPa rack travel mm	: 400 : 10.65 : +- 0.05

: 700 : 170.0 : + 5.0 : + 8.0 : - 700 : 154.0 : + 1.0 : + 4.0
: 9.90 : 1150 : +- 5
LVERÝ
: 100 : 110.0 : + 15.0 : + 19.0
: 450 : 22.0 : + 3.0 : + 6.0 : 8.0 : 12.0

End of test specification sheet

Aneroid pressure hPa : 900

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 02.07.96 Test oil : ISO 4113

Combination No. : 0 402 746 610

Injection pump

Pump designation : PES6P120A720RS7409

EP type number : 0 412 726 956

Governor

Governer design. : RQV450...1050PA1277

Governer no. : 0 421 814 173

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE Motor : 8465.41.016

Power KW : 186.0

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5

Overflow quantity

min. l/h : 180 Tolerance l/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.15
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance °NW : +- 0.50

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance *NW : +- 0.50

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 11.55
Tolerance mm : +- 0.05

1	
Del. quantity	- Rated speed rpm : 1550
cm3/1000 strokes : 184.0	guide sleeve
Tolerance	travel mm : 11.50 Tolerance mm : +- 0.50
cm3/1000 strokes : +- 1.0	. Toterance min . The 0.50
Check tolerance +	GUIDE SLEEVE POSITION
cm3/1000s. : +- 4.0	Rated speed rpm : 1375
Spreed	. Nated speed ipin . 1979
Tolerance +	Rack travel in mm : 10.00
cm3/1000 strokes : 5.0	Tolerance mm : +- 2.70
Check tolerance	
cm3/1000s. : 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
+	
Rated speed rpm : 450	Rated speed rpm : 1050 Aneroid pressure
	hPa : 900
Rack travel in mm: 5.20	Del. quantity
Tolerance mm : + 0.10 +	cm3/1000 strokes : 184.0
Del. quantity + cm3/1000 strokes : 22.0 +	· Tolerance · cm3/1000 strokes : +- 1.0
Tolerance	Check tolerance
cm3/1000 strokes : + 3.0	cm3/1000s. : +- 4.0
Check tolerance	Spreed
cm3/1000s. : +- 6.0 +- Spreed	Tolerance cm3/1000 strokes : 5.0
Tolerance	Check tolerance
cm3/1000 strokes : 8.0	cm3/1000s. : 9.0
Check tolerance	
cm3/1000s. : 12.0	
1	CONTROL LEVER
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	control lever position degree : 118.0
	tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	
Potest around non	RATED SPEED
Rated speed rpm : 450 + guide sleeve +	rack travel mm : 10.50
travel mm : 2.71 +	Rated speed rpm : 1095
Tolerance mm : +- 0.20 +	Tolerance 1/min : +- 5
Rated speed rpm : 1110 +	rack travel mm : 4.00
guide sleeve	Rated speed rpm : 1240
travel mm : 7.40 +	Tolerance 1/min : + 15
Tolerance mm : + 0.10	rack travel mm : 0.50
Rated speed rpm : 836	Tolerance mm : +- 0.50
guide sleeve +	Rated speed rpm : 1550
travel mm : 5.75	
Tolerance mm : $+$ 0.25	
Rated speed rpm : 580	LOW IDLE
guide sleeve +	
travel mm : 3.81	
Tolerance mm : +- 0.25 +	

G02

control lever position degree tolerance degree Testing: Rated speed rpm rack travel mm Tolerance mm	: +- 4.0 : 450 : 5.20 : +- 0.10	Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 203.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000S. : +- 6.0 Aneroid pressure hPa : Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 178.0
CRT mm min. Rated speed rpm	: > 6.70 : 440	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 1050 : 11.55 : + 0.05 : 600 : 11.60 : + 0.10	BREAKAWAY Rack travel in mm : 10.50 Rated speed rpm : 1095 Tolerance 1/min : + 5
ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 600 : 900 : 11.55 : +- 0.05	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 120.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0
MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: - : 600 : 10.85 : +- 0.20 : 600	LOW IDLE Rated speed rpm : 450 Del. quantity cm3/1000 strokes : 22.0 Tolerance cm3/1000 strokes : +- 3.0
Pressure hPa rack travel mm Tolerance mm	: 360 : 11.30 : +- 0.05	- Check tolerance - cm3/1000s. : + 6.0 - Spreed - Tolerance - cm3/1000 strokes : 8.0 - Check tolerance - cm3/1000s. : 12.0
FUEL DELIVERY CHAR Aneroid pressure hPa	RACTERISTICS: 900	End of test specification sheet

GO3

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 04.07.96 Test oil : ISO 4113

Combination No. : 0 402 796 816

Injection pump

Pump designation : PES6P120A720/3LS7396

EP type number : 0 412 726 948

Governor

Governer design. : RE30

Governer no. : 0 421 890 035

Cust. part No. : 51.11103-7485

Customer-spec. information

Customer : MAN

Motor : D 2866 LF 10

Power KW : 309.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.85 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 13.00 Tolerance mm : +- 0.50

Firing order : 6-2-4-1-5-

: 3

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

Tolerance : \leftarrow 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 6

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

	+ Test with control rod
TESTING & SETTING RACK TRAVEL SENSOR POSITION	in stop position
, 332, 231,	Engine speed min-1: 60
Engine speed min-1: 0	+ Amplitude V : 1.4 + Tolerance V : +/- 0.6
Setting point	+ Check
(P, R and H pump)	tolerance V : +/- 1.20
Hact V : 3.100	+ Engine speed min-1: 600
Uact V : 3.100 CRT mm : 13.00 Tolerance mm : +/- 0.05	+ Difference
Tolerance mm : +/- 0.05	Amplitude to
Check	Amplitude V : max.1.4
tolerance mm : +/- 0.10	<u>†</u>
Check value	(c) INJECTION PUMP WITH POSITIONER
(P, R and H pump)	+ (c) insection form with rostitioner
4.700	+ TEST POINT V1
Uact V : 1.700 CRT mm : 6.15	+ Rated speed rpm : 750
Tolerance mm : +/- 0.25	+ Uact V : 3.100
Check	+ Del. quantity
tolerance mm : +/- 0.30	+ cm3/1000 strokes : 285.0
	+ Tolerance
	+ cm3/1000 strokes : +- 1.0
Setting point	+ Check tolerance + cm3/1000s. : +- 4.0
(M pump)	+ Spreed
Uact V : 3.100	+ Tolerance
Uact V : 3.100 CRT mm : 12.50	+ cm3/1000 strokes : 5.0
Tolerance mm : +/- 0.05	+ Check tolerance
Check	+ cm3/1000s. : 9.0
tolerance mm : +/- 0.10	+ + FUEL DELIVERY CHARACTERISTICS
Check value	+
(M pump)	Rated speed rpm : 1000
	+ Uact V : 3.120
Uact V : 1.700	+ Del. quantity
CRT mm : 5.50 Tolerance mm : +/- 0.25	+ cm3/1000 strokes : 267.0 + Tolerance
Check	- cm3/1000 strokes : +- 4.0
tolerance mm : +/- 0.30	+ Check tolerance
	+ cm3/1000s. : +- 6.0
Stop position	Poted aread pro . 750
Uact V : Value with	+ Rated speed rpm : 750 + Uact V : 1.470
Uact V : Value with deenergised adjusting magnet	Del. quantity
and control rod in	+ cm3/1000 strokes : 73.0
stop position.	+ Tolerance
CRT mm : 0.75	+ cm3/1000 strokes : +- 5.0
Tolerance mm : +/- 0.25	+ Check tolerance
Check	+ cm3/1000S. : +- 9.0 + Spreed
tolerance mm : +/- 0.35	+ Tolerance
	- cm3/1000 strokes : 8.0
ENGINE-SPEED SENSOR	+ Check tolerance
(All P and R pumps not	+ cm3/1000s. : 12.0
H and M pumps)	†
	+ Rated speed rpm : 500

Uact V	: 1.950
Del. quantity cm3/1000 strokes Tolerance	: 118.0
cm3/1000 strokes Check tolerance	: +- 5.0
cm3/1000s.	: +- 9.0
TEST POINT L1	
Rated speed rpm Uact V Tolerance Volt Check tolerance Volt Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Spreed Tolerance cm3/1000 strokes	
Check tolerance cm3/1000s.	: 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 05.07.96 Test oil : ISO 4113

Combination No. : 0 402 846 067

Injection pump

Pump designation : PE6P120A320RS8015 EP type number : 0 412 826 016

Governor

Governer design. : RQV300...1050PA1225

Governer no. : 0 421 814 151

Cust. part No. : 11031773

: -P03 v.05/96

Customer-spec. information Customer : VCE Motor

: TD122KAE Power KW : 243.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity

min. L/h : 138 Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm : 11.00 Tolerance mm : \leftarrow 0.50

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance 'NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 9.30

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 236.0

G07

Tolerance cm3/1000 strokes : +- 1.0	guide sleeve travel mm : 3.59 Tolerance mm : +- 0.25
Check tolerance cm3/1000s. : +- 4.0	Rated speed rpm : 520 guide sleeve travel mm : 4.67
Spreed Tolerance cm3/1000 strokes : 8.0	Tolerance mm : + 0.25 Rated speed rpm : 1310 guide sleeve
Check tolerance cm3/1000s. : 11.0	travel mm : 11.50 Tolerance mm : +- 0.50
Rated speed rpm : 325	GUIDE SLEEVE POSITION
Rack travel in mm : 3.80 Tolerance mm : +- 0.30	Rated speed rpm : 1190
Del. quantity cm3/1000 strokes : 23.0 Tolerance	+ Rack travel in mm : 9.50 + Tolerance mm : +- 2.50
cm3/1000 strokes : +- 3.0 Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000S. : +- 6.0 Spreed Tolerance	+ Rated speed rpm : 700 + Aneroid pressure
cm3/1000 strokes : 5.0 Check tolerance	+ hPa : 1500 + Del. quantity
cm3/1000s. : 8.0	- cm3/1000 strokes : 236.0 - Tolerance - cm3/1000 strokes : +- 1.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ Check tolerance + cm3/1000S. : + 4.0 + Spreed
GUIDE SLEEVE TRAVEL	Tolerance cm3/1000 strokes : 8.0 Check tolerance
Rated speed rpm : 325 guide sleeve	cm3/1000s. : 11.0
travel mm : 2.09 Tolerance mm : +- 0.25	CONTROL LEVER
Rated speed rpm : 1095 guide sleeve	control lever
travel mm : 7.90 Tolerance mm : +- 0.25	<pre>position degree : 61.0 tolerance degree : +- 4.0 </pre>
Rated speed rpm : 1028 guide sleeve travel mm : 6.85	<pre>control lever position degree : 125.0 tolerance degree : +- 4.0</pre>
Tolerance mm : +- 0.25	RATED SPEED
guide sleeve travel mm : 2.96	rack travel mm : 8.30 Rated speed rpm : 1120
Tolerance mm : +- 0.25	Tolerance 1/min : +- 5 rack travel mm : 4.00
Rated speed rpm : 437	+ Rated speed rpm : 1180

Tolerance 1/min	: +- 15
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50 : 1265
LOW IDLE	
control lever position degree tolerance degree	: 74.0 : +- 4.0
control lever position degree tolerance degree	: 10.0 : + 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 3.80 : ← 0.30
Rated speed rpm	: 225
CRT mm min.	: > 5.40
Rated speed rpm	: 375
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 700 : 9.30 : +- 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 9.30 : +- 0.05
rack travel mm	: 9.30 : +- 0.05
rack travel mm Tolerance mm	: 9.30 : +- 0.05 : : 500 : 7.80 : +- 0.10
rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm	: - : 500 : 7.80 : + 0.10
rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 7.80 : + 0.10
rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 7.80 : + 0.10 : 500

rack travel mm Tolerance mm	: 1.30 : +- 0.20
Pressure hPa rack travel mm Tolerance mm	: 290 : 0.25 : + 0.05
FUEL DELIVERY CHAR	RACTERISTICS
Aneroid pressure	
hPa Rated speed rpm	700
Del. quantity cm3/1000 strokes	: 188.0
Tolerance cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: +- 4.0
BREAKAWAY	
Rack travel in mm	: 8.30 : 1120
Rated speed rpm Tolerance 1/min	: +- 5
STARTING FUEL DELI	EVERY
Rated speed rpm	
rack travel mm Tolerance mm	: 20.50 : +- 0.50
Del. quantity cm3/1000 strokes	: 150.0
Tolerance cm3/1000 strokes	: +- 15.0
Check tolerance	
cm3/1000s.	: +- 19.0
LOW IDLE	
Rated speed rpm	: 325
Del. quantity cm3/1000 strokes	: 23.0
Tolerance cm3/1000 strokes	: +- 3.0
Check tolerance cm3/1000s.	: +- 6.0
Spreed	0.0
Tolerance	5.0
cm3/1000 strokes	: 5.0

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cm3/1000s.	:	8.0	
			

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 04.07.96 Test oil : ISO 4113

Combination No. : 0 402 946 012

Injection pump

Pump designation : PES6P120A320RS8031 EP type number : 0 412 926 022

Governor

Governer design. : RQV300...1000PA1181K

Governer no. : 0 421 815 975

Cust. part No. : CCEP 5145A 66-234

Customer-spec. information

Customer : RENAULT V.I.

: MIDR 063540 P 41 : 300.0 Motor

Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.65
Tolerance mm : +- 0.05 Check tolerance mm : \leftarrow 0.10

Rack travel in mm : 11.00 : +- 0.50 Tolerance mm

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.50

Start of delivery mark

 $^{\circ}$ NW after s.o.d. : -0.17

Tolerance : +- 0.50 Check

tolerance *NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

: 21.00

and maximum rack

travel 19.50 Difference * CS : 2.50

BASIC SETTING

Rated speed rpm : 1000	Tolerance mm : +- 0.25 Rated speed rpm : 383
Rack travel in mm : 13.30 Tolerance mm : + 0.05	<pre>+ guide sleeve + travel mm : 2.42 + Tolerance mm : +- 0.25</pre>
Del. quantity cm3/1000 strokes : 360.0	Rated speed rpm : 433 guide sleeve travel mm : 2.89
Tolerance cm3/1000 strokes : +- 1.0	Tolerance mm : +- 0.25 Rated speed rpm : 530
Check tolerance cm3/1000s. : + 4.0	guide sleeve travel mm : 3.71 Tolerance mm : + 0.25
Spreed Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 1350 guide sleeve travel mm : 13.50
Check tolerance cm3/1000s. : 9.0	Tolerance mm : +- 0.50
Rated speed rpm : 325	GUIDE SLEEVE POSITION
Rack travel in mm : -7.80 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 38.0	+ Rated speed rpm : 1220 + Rack travel in mm : 12.00 + Tolerance mm : + 2.00 +
Tolerance cm3/1000 strokes : +- 2.0 Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : +- 6.0 Spreed	Rated speed rpm : 1000 Aneroid pressure hPa : 1400
Tolerance cm3/1000 strokes : 8.0 Check tolerance	Del. quantity + cm3/1000 strokes : 360.0
cm3/1000s. : 12.0	+ Tolerance + cm3/1000 strokes : +- 1.0
	+ Check tolerance
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance
	cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve	- cm3/1000s. : +- 4.0 - Spreed - Tolerance - cm3/1000 strokes : 5.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.47 Tolerance mm : +- 0.25	cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.47	cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 295.0 tolerance degree : +- 4.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.47 Tolerance mm : +- 0.25 Rated speed rpm : 1082 guide sleeve travel mm : 9.30	cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 295.0

Tolerance 1/min	: +- 5
rack travel mm Rated speed rpm Tolerance 1/min	: −9.30 : 1210 : ← 15
rack travel mm Tolerance mm Rated speed rpm	: -12.80 : +- 0.50 : 1300
LOW IDLE	
control lever position degree tolerance degree	: 253.0 : + 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : -7.80 : + 0.10
Rated speed rpm	: 200
CRT mm max.	: < -6.00
Rated speed rpm	: 360
TORQUE CONTROL	
Rated speed rpm	: 1000
Rated speed rpm rack travel mm Tolerance mm	: 600 : -0.55 : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 800 : -0.35 : + 0.20
Rated speed rpm rack travel mm Tolerance mm	: 350 : -1.80 : + 0.25
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa Tolerance mm	: 1000 : 1400 : +- 0.10
MEASUREMENT	

Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 1000 : -5.50 : + 0.20	
Rated speed rpm	: 1000	
Pressure hPa rack travel mm Tolerance mm	: 280 : -4.50 : +- 0.20	
Pressure hPa rack travel mm Tolerance mm	: 560 : -3.00 : +- 0.05	
START CUT-OUT		
Rated speed rpm Rated speed rpm	: > 175 : < 240	
Check		
speed 1/min	: > 155	
Check	: < 260	
Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa	: < 260 RACTERISTICS : 1400	
Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity	: < 260 RACTERISTICS : 1400 : 600	
Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: < 260 RACTERISTICS : 1400 : 600	
Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: < 260 ARACTERISTICS : 1400 : 600 : 390.0	
Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure	: < 260 RACTERISTICS : 1400 : 600 : 390.0 : + 3.0	
Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: < 260 RACTERISTICS : 1400 : 600 : 390.0 : + 3.0	
Check speed 1/min FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: < 260 RACTERISTICS : 1400 : 600 : 390.0 : +- 3.0 : +- 6.0 : -	

Rack travel in mm : -1.00
Rated speed rpm : 1105
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

100 Rated speed rpm : 20.25 rack travel mm : **←** 0.75 Tolerance mm Del. quantity

cm3/1000 strokes : 190.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance cm3/1000s. : +- 19.0

LOW IDLE

325 Rated speed rpm Del. quantity cm3/1000 strokes : 38.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance 8.0 cm3/1000 strokes : Check tolerance 12.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 10.07.96 Test oil : ISO 4113

Combination No. : 9 400 083 458

Injection pump

Pump designation : PES6A100D320/3RS2691

: -2

EP type number : 9 410 230 028

Governor

Governer design. : RQV350...1100AB1218

: -1R

Governer no. : 9 420 080 302

Cust. part No. : 3354617

Customer—spec. information Customer : CUMMINS Motor : 6 CT Power KW : 156.6

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5

Tolerance bar : +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85
Tolerance mm : \leftarrow 0.05
Check
tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

*NW after s.o.d. : 10.00 Tolerance : +- 0.10

Check

tolerance "NW : +- 0.23

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel : 10.50
Tolerance mm : +- 1.50
Difference * CS : 3.50

BASIC SETTING

Rated speed rpm : 1100

	• • •
12.45	guide sleeve
Rack travel in mm: 12.65	travel mm : 4.45
Tolerance mm : + 0.05	Tolerance mm : + 0.25
No. 1 martitus	
Del. quantity + cm3/1000 strokes : 118.0 +	GUIDE SLEEVE POSITION
cm5/1000 strokes : 116.0	GOIDE STEENE LOSTITON
Tolerance	Rated speed rpm : 1315
cm3/1000 strokes : +- 1.0	Nated speed Ipili . 1313
CIID/ 1000 SCIORES	Rack travel in mm : 16.50
Check tolerance	Tolerance mm : +- 1.30
cm3/1000s. : +- 3.0 +	TOTOL GIVE THE
4	
Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance +	
cm3/1000 strokes : 3.5	Rated speed rpm : 1100
	Aneroid pressure
Check tolerance +	hPa : 800
cm3/1000s. : 8.0 +	Del. quantity
t	cm3/1000 strokes : 118.0
Rated speed rpm : 350 +	Tolerance
†	cm3/1000 strokes : + 1.0
<u> </u>	Check tolerance
Rack travel in mm: 5.90	cm3/1000s. : +- 3.0
Tolerance mm : +- 0.10	Spreed
Del. quantity + cm3/1000 strokes : 15.0 +	Tolerance cm3/1000 strokes : 3.5
cm3/1000 strokes : 15.0 + Tolerance	Check tolerance
cm3/1000 strokes : + 2.0 +	cm3/1000s. : 8.0
Check tolerance	CIID7 10003 0.0
cm3/1000s. : + 4.5	
Spreed	
Tolerance +	CONTROL LEVER
cm3/1000 strokes : 5.5	
Check tolerance	control lever
cm3/1000s. : 9.0 +	position degree : 56.0
+	tolerance degree : + 4.0
Ì	•
(B) SETTING OF INJECTION PUMP +	control lever
WITH GOVERNOR +	position degree : 111.0
†	tolerance degree : +- 4.0
	DATES OFFE
GUIDE SLEEVE TRAVEL +	RATED SPEED
Dated aread man	rack travel mm : 11.60
Rated speed rpm : 1150 +	
guide sleeve	
travel mm : 7.00 + 7.00 + 7.00 + 7.00	Tolerance 1/min : +- 5
Tolerance mm : +- 0.10	rack travel mm : 4.00
Rated speed rpm : 1400	Rated speed rpm : 1355
guide sleeve +	Tolerance 1/min : + 15
travel mm : 8.95	Total and Triming
Tolerance mm : +- 0.25 +-	rack travel mm : 0.50
+	Tolerance mm : + 0.50
Rated speed rpm : 350	Rated speed rpm : 1500
guide sleeve	•
travel mm : 1.65 +	
Tolerance mm : +- 0.25	
+	LOW IDLE
Rated speed rpm : 650 +	

	+	rack travel mm : 0.40
control lever	-	Tolerance mm : + 0.10
position degree		
tolerance degree	: + 4.0 +	Pressure hPa : 600_
	†	rack travel mm : 1.35
control lever	1(0)	Tolerance mm : +- 0.05
position degree	10.0 +	
tolerance degree	: - 4.0	START CUT-OUT
Testing:	1	START COT OUT
. cotg.	1	Rated speed rpm : > 100
Rated speed rpm	: 350	Rated speed rpm : < 270
rack travel mm	: 5.90 +	
Tolerance mm	: + 0.10 +	Check
	100	speed 1/min :> 80
Rated speed rpm	: 100 +	Check
CRT mm min.	. > 0.00	speed 1/min : < 290
CRT IMI INTELL	. > 9.00 I	
Rated speed rpm	: 425	FUEL DELIVERY CHARACTERISTICS
Maron speed the	+	
		Aneroid pressure
TORQUE CONTROL	+	hPa : 800
	†	Rated speed rpm : 700
Rated speed rpm	: 1100 +	Del. quantity
rack travel mm	12.05	cm3/1000 strokes : 133.0 Tolerance
Tolerance mm	: - 0.03	cm3/1000 strokes : +- 2.0
Rated speed rpm	. 700	Check tolerance
rack travel mm	13.65	cm3/1000s. : +- 4.0
rack travel mm Tolerance mm	: +- 0.05	
	+	Aneroid pressure
		hPa : 800
		Rated speed rpm : 800
Tolerance mm	: +- 0.10	Del. quantity
Data dama adama	. 050	cm3/1000 strokes : 130.5 Tolerance
Rated speed rpm rack travel mm	12 05 I	cm3/1000 strokes : +- 2.0
Tolerance mm	: + 0.15	Check tolerance
TO CET ALTCE TIME	1	cm3/1000s. : +- 4.0
ANEROID/ALTITUDE	+	Aneroid pressure
COMPENSATOR TEST	+	hPa : -
	+	Rated speed rpm : 500
0577710	†	Del. quantity cm3/1000 strokes : 94.5
SETTING	†	
Rated speed rpm	: 500	Tolerance cm3/1000 strokes : +- 1.0
Pressure hPa	: 800	Check tolerance
rack travel mm	: 13.65	cm3/1000s. : +- 3.0
Tolerance mm	: + 0.05	
	+	
MEASUREMENT	+	BREAKAWAY
Danas	+	
Pressure hPa	: 500	Rack travel in mm : 11.60
Rated speed rpm	· 1	Rated speed rpm : 1160
Rated speed rpm	: 500	Tolerance 1/min : +- 5
Harta opeca i pili	1	
Pressure hPa	: 500	

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.00
Tolerance mm : + 1.00
Del. quantity
cm3/1000 strokes : 170.0
Tolerance
cm3/1000 strokes : + 8.0
Check tolerance
cm3/1000s. : + 11.0

LOW IDLE

350 Rated speed rpm Del. quantity cm3/1000 strokes : 15.0 Tolerance 2.0 cm3/1000 strokes : +-Check tolerance cm3/1000s. 4.5 Spreed Tolerance cm3/1000 strokes : 5.5 Check tolerance 9.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 12.09.89 : ISO 4113

Combination No. : 0 400 464 127

Injection pump

Pump designation : PES4A75D410/3RS1255

EP type number : 0 410 474 966

Governor

Governer design. : RS325/1650A0C2087L

Governer no. : 0 420 220 003

Cust. part No. :

Customer-spec. information

Customer : KHD

Motor

: F4L912

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

173.5

Tolerance bar

: **+** 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

x length mm : 600

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Firing order : 1-3-4-2

: 0-90-180-270 Tolerance

: +- 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1650

Rack travel in mm : 9.95 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 51.5

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : +- 2.0

Spreed

Tolerance

cm3/1000 strokes :

2.0

Check tolerance

cm3/1000s.

3.5

325 Rated speed rpm :

Rack travel in mm : 6.00 Tolerance mm : +- 0.10

Del. quantity cm3/1000 strokes : 19.5

Tolerance

cm3/1000 strokes : +- 2.0

G19

Check tolerance cm3/1000s.	: ← 3.5 ÷	
Spreed Tolerance cm3/1000 strokes	: 2.0	LOW IDLE
Check tolerance cm3/1000s.	: 3.0	control lever position degree : 67.0
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	tolerance degree : +- 4.0 Testing:
GUIDE SLEEVE POSI	TTON	Rated speed rpm : 325 rack travel mm : 6.00 Tolerance mm : +- 0.10
	}	
Rated speed rpm Rack travel in mm	+	rack travel mm : 2.00 Rated speed rpm : 470 Tolerance 1/min : +- 30
Tolerance mm		Rated speed rpm : 100
FULL LOAD DELIVER	Y AT FULL LOAD STOP	CRT mm min. : > 19.50
Rated speed rpm	: 1500	Rated speed rpm : 600
Aneroid pressure hPa Del. quantity	: - ‡	CRT mm max. : < 1.80
cm3/1000 strokes Tolerance	+	TORQUE CONTROL
cm3/1000 strokes Check tolerance	+	Rated speed rpm : 1650
cm3/1000s. Spreed	: +- 2.0	rack travel mm : 9.95 Tolerance mm : +- 0.05
Tolerance cm3/1000 strokes Check tolerance	: 2.0	Rated speed rpm : 500 rack travel mm : 10.00
cm3/1000s.	: 3.5	Tolerance mm : +- 0.10
CONTROL LEVER	‡	
control lever position degree tolerance degree	: 98.0 : + 4.0	BREAKAWAY
RATED SPEED	<u> </u>	Rack travel in mm : 8.90 Rated speed rpm : 1695
rack travel mm Rated speed rpm Tolerance 1/min	: 8.90 : 1695 : + 5	Tolerance 1/min : +- 5
rack travel mm Rated speed rpm	: 4.00 : 1755	STARTING FUEL DELIVERY
Tolerance 1/min	: + 15 +	Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 115.0
rack travel mm Tolerance mm Rated speed rpm	: + 0.55 : + 1900	Tolerance cm3/1000 strokes : +- 5.0

Check tolerance cm3/1000s. : +- 8.0

LOW IDLE

Rated speed rpm : 325

Del. quantity

cm3/1000 strokes : 19.5

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : \leftarrow 3.5

Spreed

Tolerance

cm3/1000 strokes : 2.0

Check tolerance

cm3/1000s. : 3.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 10.07.96 Test oil : ISO 4113

Combination No. : 9 400 030 731

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV475...1100A0C843R

Governer no. : 9 420 034 709

Cust. part No. : 3929406

Customer-spec. information Customer : CDC Motor : 6BT

Power KW : 100.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85
Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 11.25

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 94.0	Check tolerance cm3/1000s. : +- 3.0 Spreed
Tolerance cm3/1000 strokes : + 1.0	Tolerance cm3/1000 strokes : 3.5
Check tolerance cm3/1000s. : + 3.0	Check tolerance cm3/1000S. : 6.0
 +	
Spreed Tolerance cm3/1000 strokes : 3.5	CONTROL LEVER
Check tolerance cm3/1000s. : 6.0	position degree : 107.0 tolerance degree : +- 4.0
Rated speed rpm : 500	RATED SPEED
Rack travel in mm: 5.10 Tolerance mm: + 0.10	rack travel mm : 10.20 Rated speed rpm : 1165 Tolerance 1/min : +- 5
Del. quantity + cm3/1000 strokes : 18.5 +	rack travel mm : 5.40
Tolerance	Rated speed rpm : 1230
cm3/1000 strokes : +- 2.0 +- Check tolerance +-	Tolerance 1/min : +- 5
cm3/1000s. : +- 4.5	rack travel mm : 0.85
Spreed	Tolerance mm : +- 0.55
Tolerance +	Rated speed rpm : 1300
cm3/1000 strokes : 3.5 + Check tolerance +	rack travel mm : 5.40
cm3/1000s. : 5.5	Rated speed rpm : 1230
1 3.3	Transcription ()
+	
(B) SETTING OF INJECTION PUMP + WITH GOVERNOR +	LOW IDLE
+	
	control lever
GUIDE SLEEVE POSITION	position degree : 88.0 tolerance degree : +- 4.0
Rated speed rpm : 800	toterance degree 4.0
+	Setting point w/out bumper spring
Rack travel in mm: 0.50	500
Tolerance mm : +- 0.20 +	Rated speed rpm : 500 rack travel mm : 4.60
governor spring	rack travet mm : 4.00
pre-tension +	Testing:
click setting x : 4.00	_
+	Rated speed rpm : 500
FILL LOAD DELTUEDY AT CULL LOAD STOP	rack travel mm : 5.10 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : +- 0.10
Rated speed rpm : 1100 Aneroid pressure	Rated speed rpm : 100
hPa : 900	CRT mm min. :> 19.00
Del. quantity	
cm3/1000 strokes : 94.0 +	TOROUS CONTROL
Tolerance + 1.0	TORQUE CONTROL
cm3/1000 strokes : +- 1.0 +	

Rated speed rpm rack travel mm Tolerance mm	: 1100 : 11.25 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 12.00 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 800 : 900
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 800 : 11.30 : + 0.20
Rated speed rpm	: 800
Pressure hPa rack travel mm	: 650 : 11.70
Tolerance mm	: +- 0.05
	: +- 0.05
Tolerance mm FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 0.05 RACTERISTICS : 900 : 800
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: +- 0.05 RACTERISTICS : 900 : 800 : 107.5 : +- 2.0
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: +- 0.05 RACTERISTICS : 900 : 800 : 107.5 : +- 2.0 : +- 4.0 : -
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: +- 0.05 RACTERISTICS : 900 : 800 : 107.5 : +- 2.0 : +- 4.0 : : 800

Rack travel in mm	:	10.20
Rated speed rpm	:	1165
Tolerance 1/min	:	+- 5

STARTING FUEL DELIVERY

Rated speed rpm rack travel mm Tolerance mm	: 100 : 20.50 : +- 0.50
Del. quantity cm3/1000 strokes Tolerance	: 120.5
cm3/1000 strokes	: +- 10.0
Check tolerance cm3/1000s.	: +- 15.0

LOW IDLE

Rated speed rpm Del. quantity	:	500
cm3/1000 strokes	:	18.5
Tolerance cm3/1000 strokes	: +-	2.0
Check tolerance cm3/1000s.	: +-	4.5
Spreed Tolerance		
cm3/1000 strokes	:	3.5
Check tolerance cm3/1000s.	:	5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 09.07.96 : ISO 4113

Combination No. : 9 400 030 732

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV475...1250A0C845R

Governer no. : 9 420 034 711

Cust. part No. : 3929407

Customer-spec. information Customer : CDC : 6BT Motor : 97.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 : +- 2.0 Tolerance °C

Overflow valve : 1 417 413 047

2.0 Inlet press. bar : 2.0 Tolerance bar : + 0.1 Inlet press. bar :

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05 : +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 10.95

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 91.0	Check tolerance cm3/1000s. : +- 3.0 Spreed
Tolerance cm3/1000 strokes : +- 1.0	Tolerance cm3/1000 strokes : 3.5
Check tolerance cm3/1000s. : + 3.0	Check tolerance cm3/1000s. : 6.5
Spreed Tolerance cm3/1000 strokes : 3.5	CONTROL LEVER
Check tolerance cm3/1000s. : 6.5	control lever position degree : 117.0 tolerance degree : +- 4.0
Rated speed rpm : 475	RATED SPEED
Rack travel in mm : 5.10 Tolerance mm : +- 0.10 Del. quantity	rack travel mm : 9.90 Rated speed rpm : 1315 Tolerance 1/min : +- 5
cm3/1000 strokes : 18.5 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance	rack travel mm : 5.50 Rated speed rpm : 1370 Tolerance 1/min : +- 5
cm3/1000s. : +- 4.5 Spreed Tolerance cm3/1000 strokes : 3.5	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1500
Check tolerance cm3/1000s. : 5.0	rack travel mm : 5.50 Rated speed rpm : 1370
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	<pre>control lever position degree : 91.0 tolerance degree : +- 4.0</pre>
Rated speed rpm : 800	Setting point w/out bumper spring
Rack travel in mm: 0.50 + Tolerance mm: + 0.20 +	Rated speed rpm : 475 rack travel mm : 4.60
governor spring pre-tension click setting x : 5.00	Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 475 rack travel mm : 5.10 Tolerance mm : + 0.10
Rated speed rpm : 1250	Rated speed rpm : 100
Aneroid pressure +	CRT mm min. : > 19.00
Del. quantity + cm3/1000 strokes : 91.0 + Tolerance + Tolerance	TORQUE CONTROL
cm3/1000 strokes : + 1.0	

Rated speed rpm : 1250 rack travel mm : 10.95 Tolerance mm : + 0.05

Rated speed rpm : 800 rack travel mm : 11.30 Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 800

Del. quantity

cm3/1000 strokes : 97.0

Tolerance

cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : + 4.0

BREAKAWAY

Rack travel in mm: 9.90
Rated speed rpm: 1315
Tolerance 1/min: +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 0.50

Del. quantity

cm3/1000 strokes : 120.5

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : + 15.0

LOW IDLE

Rated speed rpm : 475

Del. quantity

cm3/1000 strokes : 18.5

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.5

Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s. : 5.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 09.07.96

: ISO 4113 Test oil

Combination No. : 9 400 030 739

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV475...1250A0c852R

Governer no. : 9 420 034 718

Cust. part No. : 3929403

Customer-spec. information Customer : CDC Motor : 6BT

: 114.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C 2.0

Overflow valve : 1 417 413 047

2.0 Inlet press. bar : Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 : +- 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: + 0.50 Tolerance

Check

tolerance °NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.75

Tolerance mm : \leftarrow 0.05

Del. quantity + cm3/1000 strokes : 102.0	Check tolerance cm3/1000s. : +- 3.0 Spreed
Tolerance cm3/1000 strokes : +- 1.0	Tolerance cm3/1000 strokes : 3.5 Check tolerance
Check tolerance cm3/1000s. : +- 3.0	cm3/1000s. : 6.0
Spreed +	CONTROL LEVER
cm3/1000 strokes : 3.5	control lever
Check tolerance cm3/1000s. : 6.0	position degree : 116.0 tolerance degree : +- 4.0
Rated speed rpm : 475	RATED SPEED
Rack travel in mm: 5.10	rack travel mm : 10.70 Rated speed rpm : 1320
Tolerance mm : + 0.10 + Del. quantity +	Tolerance 1/min : +- 5
cm3/1000 strokes : 21.5	rack travel mm : 7.50 Rated speed rpm : 1365
cm3/1000 strokes : +- 2.0 +- Check tolerance	Tolerance 1/min : +- 5
cm3/1000s. : +- 4.5 Spreed	rack travel mm : 0.85 Tolerance mm : + 0.55
Tolerance cm3/1000 strokes : 3.5	Rated speed rpm : 1450
Check tolerance cm3/1000s. : 5.5	rack travel mm : 7.50 Rated speed rpm : 1365
‡	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
Ŧ	control lever
GUIDE SLEEVE POSITION	position degree : 91.0 tolerance degree : +- 4.0
Rated speed rpm : 800	Setting point w/out bumper spring
Rack travel in mm: 0.50 Tolerance mm: +- 0.20	-
+	Rated speed rpm : 475 rack travel mm : 4.60
governor spring pre-tension click setting x : 5.00	Testing:
ctick setting x . 5.00	Rated speed rpm : 475 rack travel mm : 5.10
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 5.10 Tolerance mm : +- 0.10
Rated speed rpm : 1250 Aneroid pressure	Rated speed rpm : 100
hPa : 900 +	CRT mm min. : > 19.00
Del. quantity cm3/1000 strokes : 102.0 Tolerance	TORQUE CONTROL
cm3/1000 strokes : + 1.0	TORQUE CONTINUE

: 1250 Rated speed rpm : 11.75 rack travel mm : +- 0.05 Tolerance mm Rated speed rpm 008 12.10 rack travel mm : +- 0.10Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING 800 Rated speed rpm Pressure hPa 900 **MEASUREMENT** Pressure hPa 800 Rated speed rpm rack travel mm 11.30 Tolerance mm : +- 0.20 Rated speed rpm 800 Pressure hPa 650 rack travel mm 11.70 Tolerance mm : +- 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure 900 hPa Rated speed rpm 800 Del. quantity cm3/1000 strokes : 108.0 Tolerance 2.0 cm3/1000 strokes : +-Check tolerance cm3/1000S.4.0 Aneroid pressure 800 Rated speed rpm Del. quantity cm3/1000 strokes : 97.5 Tolerance cm3/1000 strokes : + 1.0Check tolerance cm3/1000s. : +- 3.0

Rack travel in mm : 10.70
Rated speed rpm : 1320
Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 120.5
Tolerance
cm3/1000 strokes : + 10.0
Check tolerance
cm3/1000s. : + 15.0

LOW IDLE

Rated speed rpm : 475 Del. quantity 21.5 cm3/1000 strokes : Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.5 : +-Spreed Tolerance 3.5 cm3/1000 strokes : Check tolerance cm3/1000s. 5.5 :

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 10.07.96 Edition : ISO 4113 Test oil

Combination No. : 9 400 030 740

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV425...1200A0C853R

Governer no. : 9 420 034 719

Cust. part No. : 3929410

Customer-spec. information Customer : CDC : 6BT Motor : 100.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

2.0 Inlet press. bar : Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : +- 0.05 Check tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00 : +- 0.50

Tolerance

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 11.05

Tolerance mm : +- 0.05

H03

Del. quantity	- Check tolerance
cm3/1000 strokes : 93.0	- cm3/1000s. : +- 3.0
CIID/ 1000 Strokes . 75.0	- Spreed
Tolerance	- Spreed - Tolerance
7 7 9 1 411 1 7	
cm3/1000 strokes : +- 1.0	
	- Check tolerance
Check tolerance	- cm3/1000s. : 6.0
cm3/1000s. : +- 3.0	<u>-</u>
	_
Spreed	
Tolerance	- CONTROL LEVER
cm3/1000 strokes : 3.5	<u>.</u>
	- control lever
Check tolerance	- position degree : 113.0
cm3/1000s. : 6.0	- tolerance degree : +- 4.0
+	-
Rated speed rpm : 425	- RATED SPEED
+	-
-	- rack travel mm : 10.00
Rack travel in mm: 5.10	- Rated speed rpm : 1275
Tolerance mm : + 0.10	- Tolerance 1/min : +- 5
Del. quantity	
cm3/1000 strokes : 18.5	- rack travel mm : 6.10
Tolerance	- Rated speed rpm : 1335
cm3/1000 strokes : + 2.0	- Tolerance 1/min : +- 5
Check tolerance	-
cm3/1000s. : + 4.5	- rack travel mm : 0.85
Spreed	- Tolerance mm : +- 0.55
Tolerance	- Rated speed rpm : 1425
cm3/1000 strokes : 3.5	
Check tolerance	rack travel mm : 6.10
cm3/1000s. : 5.5	- Rated speed rpm : 1335
· 3.3	- Mateu opecu i piii . 1335
1	
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	- LOW IDLE
MILLI GOAFWAOW	. COM IDEE
<u> </u>	•
	- control lever
GUIDE SLEEVE POSITION	position degree : 80.0
GOIDE SEEVE POSITION	tolerance degree : +- 4.0
Datad aroad arm a 900	toterance degree . '- 4.0
Rated speed rpm : 800	Setting point Wout human caring
Book travel in me : 0.50	Setting point w/out bumper spring
Rack travel in mm: 0.50	Pated speed nom . 1.25
Tolerance mm : + 0.20	Rated speed rpm : 425
†	rack travel mm : 4.60
governor spring	· Tarkina
pre-tension +	- Testing:
click setting $x : 4.50$. Date Lawrench (DE
†	Rated speed rpm : 425
	rack travel mm : 5.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : + 0.10
†	
Rated speed rpm : 1200 +	Rated speed rpm : 100
Aneroid pressure	
hPa : - +	CRT mm min. : > 19.00
Del. quantity	•
cm3/1000 strokes : 93.0	
Tolerance +	TORQUE CONTROL
cm3/1000 strokes : +- 1.0 +	
•	

Rated speed rpm : 1200 rack travel mm : 11.05 Tolerance mm : +-0.05

Rated speed rpm : 800

BREAKAWAY

Rack travel in mm : 10.00 Rated speed rpm : 1275 Tolerance 1/min : +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 120.5 Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s.; + 15.0

LOW IDLE

Rated speed rpm : 425 Del. quantity cm3/1000 strokes : 18.5 Tolerance 2.0 cm3/1000 strokes : +-Check tolerance : +- 4.5 cm3/1000s. Spreed Tolerance 3.5 cm3/1000 strokes : Check tolerance cm3/1000s. 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 17.07.96 : ISO 4113

Combination No. : 0 402 046 855

Injection pump

Pump designation : PE6P110A320RS3329 EP type number : 0 412 016 743

Governor

Governer design. : RQV325...1300PA1119

Governer no. : 0 421 814 083

Cust. part No. : 1284418/4

Customer-spec. information Customer : DAF Motor

Power KW

: NS156M : 156.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

: 208.5 bar

Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 4.85
Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

: +- 0.50 tolerance °NW

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 11.85 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 144.0

Tolerance cm3/1000 strokes	. + 10	Tolerance mm : +- 0.25
Check tolerance		Rated speed rpm : 530 guide sleeve
	· · · · · · · · · · · · · · · · · · ·	
cm3/1000S.	: +- 4.0	
	 †	Tolerance mm : + 0.25
Spreed	+	•
Tolerance	+	Rated speed rpm : 1640
cm3/1000 strokes	: 4.0	guide sleeve
	1	travel mm : 11.50
Check tolerance		Tolerance mm : +- 0.50
7 44000	: 7.5	Total file limit . 1 0.50
CM3/10008.	: 7.5	•
Rated speed rpm	: 325	GUIDE SLEEVE POSITION
	+	•
	4	Rated speed rpm : 1450
Rack travel in mm	: 4.50	•
	: + 0.10	Rack travel in mm : 10.80
		Tolerance mm : +- 1.30
Del. quantity	1	Toterance min : T 1.30
cm3/1000 strokes	: 26.0	
Tolerance	+	
cm3/1000 strokes	: ← 2.5 	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	1	
	: +- 5.0	Rated speed rpm : 1000
	· , 3.0	Aneroid pressure
Spreed	Ť	
Tolerance	10.0	
cm3/1000 strokes	: 12.0 	Del. quantity
Check tolerance	+	cm3/1000 strokes : 144.0
cm3/1000S.	: 15.0 	Tolerance
	1	cm3/1000 strokes : +- 1.0
	1	Check tolerance
	Т	
(D) CETTING OF THU	ECTION DUMP	om7/1000c · + / 0
(B) SETTING OF INJ	ECTION PUMP	cm3/1000s. : +- 4.0
(B) SETTING OF INJUNITH GOVERNOR	ECTION PUMP	Spreed
	ECTION PUMP	Spreed Tolerance
	ECTION PUMP	Spreed Tolerance cm3/1000 strokes : 4.0
		Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance
WITH GOVERNOR		Spreed Tolerance cm3/1000 strokes : 4.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL		Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance
GUIDE SLEEVE TRAVEL		Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance
GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve	L 325	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance
GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm	: 325 : 1.33	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5
GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm	L 325	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance
GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm	: 325 : 1.33 : + 0.15	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000S. : 7.5 CONTROL LEVER
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm	: 325 : 1.33	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000S. : 7.5 CONTROL LEVER control lever
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	: 325 : 1.33 : + 0.15	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000S. : 7.5 CONTROL LEVER control lever
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 325 : 1.33 : + 0.15 : 1353	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000S. : 7.5 CONTROL LEVER control lever position degree : 122.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 325 : 1.33 : ← 0.15 : 1353 : 8.29	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000S. : 7.5 CONTROL LEVER control lever
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 325 : 1.33 : + 0.15 : 1353	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +4.0
Rated speed rpm guide sleeve travel mm Tolerance mm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	L : 325 : 1.33 : ← 0.15 : 1353 : 8.29 : ← 0.20	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000S. : 7.5 CONTROL LEVER control lever position degree : 122.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm	: 325 : 1.33 : ← 0.15 : 1353 : 8.29	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED
Rated speed rpm guide sleeve travel mm Tolerance mm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	L : 325 : 1.33 : ← 0.15 : 1353 : 8.29 : ← 0.20	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000S. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000S. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900 : 4.92 : +- 0.25	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000S. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : + 5
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000S. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5 rack travel mm : 4.00
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900 : 4.92 : +- 0.25 : 405	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1460
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900 : 4.92 : + 0.25 : 405	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000S. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5 rack travel mm : 4.00
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900 : 4.92 : +- 0.25 : 405	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1460
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900 : 4.92 : + 0.25 : 405	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : +- 15
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900 : 4.92 : + 0.25 : 405 : 2.07 : + 0.25	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : + 15 rack travel mm : - 15 rack travel mm : - 15
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900 : 4.92 : + 0.25 : 405	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : +- 15 rack travel mm : 15 rack travel mm : 15 rack travel mm : 15 rack travel mm : 15
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900 : 4.92 : + 0.25 : 405 : 2.07 : + 0.25 : 455	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : +- 15 rack travel mm : 0.50
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900 : 4.92 : + 0.25 : 405 : 2.07 : + 0.25	Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : +- 15 rack travel mm : 15 rack travel mm : 15 rack travel mm : 15 rack travel mm : 15

LOW IDLE	
control lever position degree tolerance degree	: 83.0 : + 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 4.50 : + 0.10
Rated speed rpm	: 225
CRT mm min.	: > 6.00
Rated speed rpm	: 375
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 700 : 11.85 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1300 : 11.85 : +- 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 600 : 1000 : 11.85 : + 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 600 : 7.35 : + 0.20
	: 600

Pressure hPa rack travel mm Tolerance mm	: 200 : 8.40 : +- 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1000 : 700 : 145.0 : +- 2.0 : +- 5.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
BREAKAWAY	
Rack travel in mm Rated speed rpm Tolerance 1/min	: 10.85 : 1342 : + 5

LOW IDLE

Rated speed rpm Del. quantity	:	325
cm3/1000 strokes	:	26.0
cm3/1000 strokes	: +-	2.5
Check tolerance cm3/1000s. Spreed	: +-	5.0
Tolerance cm3/1000 strokes	:	12.0
Check tolerance cm3/1000s.	:	15.0

Pressure hPa : 370 rack travel mm : 10.75 Tolerance mm : + 0.05

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 17.07.96 : ISO 4113

Combination No. : 0 402 046 856

Injection pump

Pump designation : PE6P110A320RS3329Z

EP type number : 0 412 016 744

Governor

Governer design. : RQV325...1300PA1119

Governer no. : 0 421 814 083

Cust. part No. : 1284417/5

Customer-spec. information Customer : DAF : NS133M Motor Power KW : 133.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : : +-Tolerance bar 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar : +- 1.5 Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 4.85 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 20.50 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.30

Check

tolerance °NW : + - 0.50

Start of delivery mark

: + - 0.10Tolerance

Check

tolerance "NW : +- 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 11.85 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 146.0

Tolerance		† Tolerance mm : +- 0.25
cm3/1000 strokes	: +- 1.0	+ Rated speed rpm : 530
Check tolerance		+ guide sleeve
cm3/1000s.	: +- 4.0	† travel mm : 2.93
01127 1 20001		+ Tolerance mm : + 0.25
Spreed		1
		Rated speed rpm : 1640
Tolerance		
cm3/1000 strokes	: 4.0	+ guide sleeve
		† travel mm : 11.50
Check tolerance		+ Tolerance mm : +- 0.50
cm3/1000s.	: 7.5	+
		<u> </u>
Rated speed rpm	: 325	→ GUIDE SLEEVE POSITION
Nated opeca (piii	. 525	
		Rated speed rpm : 1450
		+ Rated speed rpm : 1450
Rack travel in m		T
Tolerance mm	: +- 0.10	+ Rack travel in mm : 10.80
Del. quantity		† Tolerance mm : +- 1.30
cm3/1000 strokes	: 26.0	+
Tolerance		+
cm3/1000 strokes	: +- 2.5	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance		4
cm3/1000s.	: +- 5.0	+ Rated speed rpm : 1000
Spreed		Aneroid pressure
		hPa : 1000
Tolerance	42.0	
cm3/1000 strokes	: 12.0	+ Del. quantity
Check tolerance		+ cm3/1000 strokes : 146.0
cm3/1000s.	: 15.0	+ Tolerance
		+ cm3/1000 strokes : +- 1.0
		+ Check tolerance
(B) SETTING OF I	NJECTION PUMP	
(B) SETTING OF IN	NJECTION PUMP	+ cm3/1000s. : +- 4.0
(B) SETTING OF IN	NJECTION PUMP	- cm3/1000s. : +- 4.0 - Spreed
	NJECTION PUMP	- cm3/1000s. : +- 4.0 - Spreed - Tolerance
WITH GOVERNOR		- cm3/1000s. : +- 4.0 - Spreed - Tolerance - cm3/1000 strokes : 4.0
		- cm3/1000s. : +- 4.0 - Spreed - Tolerance - cm3/1000 strokes : 4.0 - Cm3/1000 tolerance
WITH GOVERNOR GUIDE SLEEVE TRAN	VEL	- cm3/1000s. : +- 4.0 - Spreed - Tolerance - cm3/1000 strokes : 4.0
WITH GOVERNOR GUIDE SLEEVE TRAV	VEL	- cm3/1000s. : +- 4.0 - Spreed - Tolerance - cm3/1000 strokes : 4.0 - Cm3/1000 tolerance
GUIDE SLEEVE TRAN Rated speed rpm guide sleeve	VEL : 325	- cm3/1000s. : +- 4.0 - Spreed - Tolerance - cm3/1000 strokes : 4.0 - Cm3/1000 tolerance
WITH GOVERNOR GUIDE SLEEVE TRAV	VEL : 325 : 1.33	- cm3/1000s. : +- 4.0 - Spreed - Tolerance - cm3/1000 strokes : 4.0 - Cm3/1000s. : 7.5
GUIDE SLEEVE TRAN Rated speed rpm guide sleeve	VEL : 325	- cm3/1000s. : +- 4.0 - Spreed - Tolerance - cm3/1000 strokes : 4.0 - Cm3/1000 tolerance
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm	VEL : 325 : 1.33	- cm3/1000s. : +- 4.0 - Spreed - Tolerance - cm3/1000 strokes : 4.0 - Cm3/1000s. : 7.5
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm	VEL : 325 : 1.33 : + 0.15	- cm3/1000s. : +- 4.0 - Spreed - Tolerance - cm3/1000 strokes : 4.0 - Cm3/1000s. : 7.5
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	VEL : 325 : 1.33 : + 0.15	cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 4.0 Color tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	VEL : 325 : 1.33 : + 0.15 : 1353	cm3/1000s. : +- 4.0 Spreed Tolerance Color tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	VEL : 325 : 1.33 : + 0.15 : 1353 : 8.29	cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 4.0 Color tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	VEL : 325 : 1.33 : + 0.15 : 1353	cm3/1000s. : +- 4.0 Spreed Tolerance Color tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	YEL : 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20	cm3/1000s. : +- 4.0 Spreed Tolerance Color tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0
Rated speed rpm guide sleeve travel mm Tolerance mm guide sleeve travel mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm Rated speed rpm	VEL : 325 : 1.33 : + 0.15 : 1353 : 8.29	cm3/1000s. : +- 4.0 Spreed Tolerance Color tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	YEL : 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900	cm3/1000s. : +- 4.0 Spreed Tolerance Color tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 10.85
Rated speed rpm guide sleeve travel mm Tolerance mm guide sleeve travel mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm Rated speed rpm	YEL : 325 : 1.33 : +- 0.15 : 1353 : 8.29 : +- 0.20 : 900 : 4.92	cm3/1000s. : +- 4.0 Spreed Tolerance Color tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342
WITH GOVERNOR GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	YEL : 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900	cm3/1000s. : +- 4.0 Spreed Tolerance Color tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 10.85
GUIDE SLEEVE TRAV Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	YEL : 325 : 1.33 : +- 0.15 : 1353 : 8.29 : +- 0.20 : 900 : 4.92	cm3/1000s. : +- 4.0 Spreed Tolerance cm2'1000 strokes : 4.0 Cross tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5
Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm Tolerance mm Tolerance mm	VEL : 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900 : 4.92 : + 0.25	cm3/1000s. : +- 4.0 Spreed Tolerance Color tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342
GUIDE SLEEVE TRAN Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	VEL : 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900 : 4.92 : + 0.25	cm3/1000s. : +- 4.0 Spreed Tolerance Color tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5 rack travel mm : 4.00
GUIDE SLEEVE TRAN Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	 VEL : 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900 : 4.92 : + 0.25 : 405 	cm3/1000s. : +- 4.0 Spreed Tolerance Color tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1460
GUIDE SLEEVE TRAN Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	VEL : 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900 : 4.92 : + 0.25 : 405 : 2.07	cm3/1000s. : +- 4.0 Spreed Tolerance Color tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5 rack travel mm : 4.00
GUIDE SLEEVE TRAN Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	 VEL : 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900 : 4.92 : + 0.25 : 405 	cm3/1000s. : +- 4.0 Spreed Tolerance Color tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : +- 15
GUIDE SLEEVE TRAN Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm	VEL : 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900 : 4.92 : + 0.25 : 405 : 2.07 : + 0.25	cm3/1000s. : +- 4.0 Spreed Tolerance Color tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : +- 15 rack travel mm : 0.50
GUIDE SLEEVE TRAN Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	VEL : 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900 : 4.92 : + 0.25 : 405 : 2.07	cm3/1000s. : +- 4.0 Spreed Tolerance Color tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : 0.50
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	YEL : 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900 : 4.92 : + 0.25 : 405 : 2.07 : + 0.25 : 455	cm3/1000s. : +- 4.0 Spreed Tolerance Color tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : +- 15 rack travel mm : 0.50
GUIDE SLEEVE TRAN Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	VEL : 325 : 1.33 : + 0.15 : 1353 : 8.29 : + 0.20 : 900 : 4.92 : + 0.25 : 405 : 2.07 : + 0.25	cm3/1000s. : +- 4.0 Spreed Tolerance Color tolerance cm3/1000s. : 7.5 CONTROL LEVER control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1460 Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : 0.50

LOW IDLE

control lever 83.0 position degree : tolerance degree : +- 4.0

Testing:

Rated speed rpm 325 4.50 rack travel mm Tolerance mm : +- 0.10

Rated speed rpm : 225

CRT mm min. : > 6.00

375 Rated speed rpm

TORQUE CONTROL

1000 Rated speed rpm 11.85 rack travel mm Tolerance mm : +- 0.05

700 Rated speed rom 11.85 rack travel mm Tolerance mm : +- 0.05

Rated speed rpm 1300 11.85 rack travel mm : +- 0.05 Tolerance mm

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

600 Rated speed rpm Pressure hPa 1000 11.85 rack travel mm Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa 600 Rated speed rpm 6.50 rack travel mm Tolerance mm : +- 0.20

600 Rated speed rpm

310 Pressure hPa 10.55 rack travel mm : + 0.05Tolerance mm

Pressure hPa 130 rack travel mm 7.85 Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 1000 700 Rated speed rpm

Del. quantity cm3/1000 strokes : 145.0

Tolerance

cm3/1000 strokes : +-2.0 Check tolerance

: +cm3/1000s. 5.0

Aneroid pressure

hPa 1000 Rated speed rpm Del. quantity

cm3/1000 strokes : 83.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. 3.5 : +-

BREAKAWAY

Rack travel in mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : +-

LOW IDLE

Rated speed rpm Del. quantity	:	325
cm3/1000 strokes	:	26.0
Tolerance cm3/1000 strokes	: +-	2.5
Check tolerance cm3/1000s.	: +-	· 5.0
Spreed		
Tolerance cm3/1000 strokes	:	12.0
Check tolerance cm3/1000s.	:	15.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 17.07.96 : ISO 4113

Combination No. : 0 402 046 861

Injection pump

Pump designation : PE6P110A320RS3329

EP type number : 0 412 016 743

Governor

Governer design. : RQ325/1300PA1150

Governer no.

: 0 421 801 716

Cust. part No. : 1284420/4

Customer-spec. information : DAF Customer Motor : NS156M

Power KW

: 156.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve

: 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : +- 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

H14

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 5.25 : +- 0.05 Tolerance mm

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.50 Tolerance mm : \leftarrow 0.50

: 1-5- 3- 6- 2-Firing order

: 0-60-120-180-240 Phasing

: -300

Tolerance

: +- 0.30

Check

: +- 0.50 tolerance °NW

Start of delivery mark

: +- 0.10 Tolerance

Check

tolerance *NW : +- 0.75

Barrel no.

: 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm :

11.85

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 144.0

		+
Tolerance cm3/1000 strokes	: +- 1.0	<u> </u>
Check tolerance cm3/1000s.	: +- 4.0	
Spreed Tolerance cm3/1000 strokes	: 4.0	+++++++++++++++++++++++++++++++++++++++
Check tolerance cm3/1000s.	: 7.5	+
Rated speed rpm	: 325	‡
Rack travel in mm	1: 4.50 : +- 0.10	†
Del. quantity cm3/1000 strokes Tolerance	: 26.0	1
cm3/1000 strokes Check tolerance	: +- 2.5	‡
cm3/1000s. Spreed	: +- 5.0	† †
Tolerance cm3/1000 strokes Check tolerance	: 12.0	Ī
cm3/1000s.	: 15.0	Ì
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	+++++++++++++++++++++++++++++++++++++++
GUIDE SLEEVE TRAV	EL	<u> </u>
Rated speed rpm guide sleeve	: 325	
travel mm Tolerance mm	: 1.99 : + 0.10	†
Rated speed rpm guide sleeve	: 1351	+
travel mm Tolerance mm	: 6.37 : +- 0.10	†
Rated speed rpm guide sleeve	: 1300	Ī
travel mm Tolerance mm	: 6.00 : + 0.10	+
Rated speed rpm guide sleeve	: 427	Ī
travel mm Tolerance mm	: 3.54 : +- 0.10	+
Rated speed rpm	: 590	Ī

guide sleeve travel mm Tolerance mm	: 6.00 : +- 0.10
Rated speed rpm guide sleeve	: 1570
travel mm Tolerance mm	: 11.50 : + 0.50
GUIDE SLEEVE POSIT	ION
Rated speed rpm	: 650
Rack travel in mm Tolerance mm	: 20.00 : +- 0.80
FULL LOAD DELIVERY	AT FULL LOAD STOP
Rated speed rpm Aneroid pressure	: 1000
hPa Del. quantity	: 1000
cm3/1000 strokes Tolerance	: 144.0
cm3/1000 strokes Check tolerance	
cm3/1000S. Spreed	: +- 4.0
Tolerance cm3/1000 strokes	: 4.0
Check tolerance cm3/1000S.	: 7.5
CONTROL LEVER	
control lever position degree tolerance degree	: 93.0 : +- 4.0
RATED SPEED	
rack travel mm Rated speed rpm Tolerance 1/min	: 10.85 : 1345 : +- 5
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1450 : +- 15
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1600

control lever position degree tolerance degree	: 72.0 : +- 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 4.50 : + 0.10
rack travel mm Rated speed rpm	: 2.00 : 415
Rated speed rpm	: 225
CRT mm min.	: > 5.90
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 11.85 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 11.85 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1300 : 11.85 : +- 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 600 : 1000 : 11.85 : +- 0.05
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 600 : 7.35 : + 0.20
Rated speed rpm rack travel mm	: 7.35 : + 0.20
Rated speed rpm rack travel mm Tolerance mm	: 7.35 : + 0.20 : 600 : 370
Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm	: 7.35 : + 0.20 : 600 : 370 : 10.75

rack travel mm Tolerance mm	: 8.40 : +- 0.10
FUEL DELIVERY CHAI	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1000 : 700 : 145.0 : +- 2.0 : +- 5.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	:
BREAKAWAY Rack travel in mm Rated speed rpm Tolerance 1/min	: 10.85 : 1345 : +- 5
LOW IDLE	
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 325 : 26.0 : + 2.5 : + 5.0 : 12.0 : 15.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.07.96 Test oil : ISO 4113

Combination No. : 0 402 046 873

Injection pump

Pump designation : PES6P110A320RS3329 EP type number : 0 412 016 743

Governor

Governer design. : RQV325...1250PA1251

Governer no. : 0 421 814 164

Cust. part No. : 1305227/0

Customer-spec. information Customer : DAF Motor : NS177M Power KW : 177.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5
Tolerance bar : +- 0.1

Tolerance l/h: +- 10.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.25
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10

Rack travel in mm : 20.50

Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance $^{\circ}NW$: +- 0.50

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

....

Rack travel in mm : 12.25 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 149.5

H18

	+ guide sleeve
Tolerance	+ travel mm : 13.50
cm3/1000 strokes : +- 1.0	+ Tolerance mm : +- 0.50
	+
Check tolerance	
cm3/1000s. : +- 4.0	+ GUIDE SLEEVE POSITION
	+
Spreed	+ Rated speed rpm : 1360
Tolerance	<u> </u>
cm3/1000 strokes : 4.0	Rack travel in mm : 11.25
	+ Tolerance mm : + 1.30
Check tolerance	1
cm3/1000s. : 7.5	
	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 325	+
•	+ Rated speed rpm : 1000
	+ Aneroid pressure
Rack travel in mm: 4.40	+ hPa : 1500
Tolerance mm : ← 0.10	+ Del. quantity
Del. quantity	+ cm3/1000 strokes : 149.5
cm3/1000 strokes : 26.0	+ Tolerance
Tolerance	+ cm3/1000 strokes : +- 1.0
cm3/1000 strokes : + 2.5	+ Check tolerance
Check tolerance	+ cm3/1000s. : + 4.0
cm3/1000s. : + 5.0	+ Spreed
Spreed	+ Tolerance
Tolerance	+ cm3/1000 strokes : 4.0
cm3/1000 strokes : 12.0	+ Check tolerance
Check tolerance	+ cm3/1000s. : 7.5
cm3/1000s. : 15.0	+
	†
4	
(B) SETTING OF INJECTION PUMP	+ CONTROL LEVER
WITH GOVERNOR	+
	+ control lever
WITH GOVERNOR	control lever position degree : 123.0
	+ control lever
WITH GOVERNOR GUIDE SLEEVE TRAVEL	control lever position degree : 123.0 tolerance degree : +- 4.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325	control lever position degree : 123.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve	control lever position degree : 123.0 tolerance degree : +- 4.0 RATED SPEED
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.25	control lever position degree : 123.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.25
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve	control lever position degree : 123.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.25 Rated speed rpm : 1290
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : +- 0.20	control lever position degree : 123.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.25
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : +- 0.20 Rated speed rpm : 1308	control lever position degree : 123.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.25 Rated speed rpm : 1290 Tolerance 1/min : +- 5
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : +- 0.20 Rated speed rpm : 1308 guide sleeve	control lever position degree : 123.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.25 Rated speed rpm : 1290 Tolerance 1/min : +- 5 rack travel mm : 4.00
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : +- 0.20 Rated speed rpm : 1308 guide sleeve travel mm : 10.40	control lever position degree : 123.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.25 Rated speed rpm : 1290 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : +- 0.20 Rated speed rpm : 1308 guide sleeve	control lever position degree : 123.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.25 Rated speed rpm : 1290 Tolerance 1/min : +- 5 rack travel mm : 4.00
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : +- 0.20 Rated speed rpm : 1308 guide sleeve travel mm : 10.40 Tolerance mm : +- 0.15	control lever position degree : 123.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.25 Rated speed rpm : 1290 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : +- 0.20 Rated speed rpm : 1308 guide sleeve travel mm : 10.40 Tolerance mm : +- 0.15 Rated speed rpm : 868	control lever position degree : 123.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.25 Rated speed rpm : 1290 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : +- 0.20 Rated speed rpm : 1308 guide sleeve travel mm : 10.40 Tolerance mm : +- 0.15 Rated speed rpm : 868 guide sleeve	control lever position degree : 123.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.25 Rated speed rpm : 1290 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : +- 0.20 Rated speed rpm : 1308 guide sleeve travel mm : 10.40 Tolerance mm : +- 0.15 Rated speed rpm : 868 guide sleeve travel mm : 5.45	control lever position degree : 123.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.25 Rated speed rpm : 1290 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : +- 0.20 Rated speed rpm : 1308 guide sleeve travel mm : 10.40 Tolerance mm : +- 0.15 Rated speed rpm : 868 guide sleeve	control lever position degree : 123.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.25 Rated speed rpm : 1290 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : +- 0.20 Rated speed rpm : 1308 guide sleeve travel mm : 10.40 Tolerance mm : +- 0.15 Rated speed rpm : 868 guide sleeve travel mm : 5.45 Tolerance mm : +- 0.25	control lever position degree : 123.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.25 Rated speed rpm : 1290 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : +- 0.20 Rated speed rpm : 1308 guide sleeve travel mm : 10.40 Tolerance mm : +- 0.15 Rated speed rpm : 868 guide sleeve travel mm : 5.45 Tolerance mm : +- 0.25	control lever position degree : 123.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.25 Rated speed rpm : 1290 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : +- 0.20 Rated speed rpm : 1308 guide sleeve travel mm : 10.40 Tolerance mm : +- 0.15 Rated speed rpm : 868 guide sleeve travel mm : 5.45 Tolerance mm : +- 0.25 Rated speed rpm : 520	control lever position degree : 123.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.25 Rated speed rpm : 1290 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1500
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : +- 0.20 Rated speed rpm : 1308 guide sleeve travel mm : 10.40 Tolerance mm : +- 0.15 Rated speed rpm : 868 guide sleeve travel mm : 5.45 Tolerance mm : +- 0.25 Rated speed rpm : 520 guide sleeve	control lever position degree : 123.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.25 Rated speed rpm : 1290 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1500
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : +- 0.20 Rated speed rpm : 1308 guide sleeve travel mm : 10.40 Tolerance mm : +- 0.15 Rated speed rpm : 868 guide sleeve travel mm : 5.45 Tolerance mm : +- 0.25 Rated speed rpm : 520 guide sleeve travel mm : 520 guide sleeve travel mm : 3.02	control lever position degree : 123.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.25 Rated speed rpm : 1290 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : 0.50 Rated speed rpm : 1500 LOW IDLE control lever
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : +- 0.20 Rated speed rpm : 1308 guide sleeve travel mm : 10.40 Tolerance mm : +- 0.15 Rated speed rpm : 868 guide sleeve travel mm : 5.45 Tolerance mm : +- 0.25 Rated speed rpm : 520 guide sleeve travel mm : 520 guide sleeve travel mm : 3.02	control lever position degree : 123.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.25 Rated speed rpm : 1290 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1500 LOW IDLE control lever position degree : 76.0
GUIDE SLEEVE TRAVEL Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : +- 0.20 Rated speed rpm : 1308 guide sleeve travel mm : 10.40 Tolerance mm : +- 0.15 Rated speed rpm : 868 guide sleeve travel mm : 5.45 Tolerance mm : +- 0.25 Rated speed rpm : 520 guide sleeve travel mm : 5.20 guide sleeve travel mm : 3.02 Tolerance mm : +- 0.25	control lever position degree : 123.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.25 Rated speed rpm : 1290 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : 0.50 Rated speed rpm : 1500 LOW IDLE control lever

Testing:

Rated speed rpm : 325 rack travel mm : 4.40 Tolerance mm : + 0.10

Rated speed rpm : 225

CRT mm min. : > 5.90

Rated speed rpm : 375

TORQUE CONTROL

Rated speed rpm : 1000 rack travel mm : 12.25 Tolerance mm : +- 0.05

Rated speed rpm : 700 rack travel mm : 12.25 Tolerance mm : + 0.10

Rated speed rpm : 1250 rack travel mm : 12.25 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 600
Pressure hPa : 1500
rack travel mm : 12.25
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 600
rack travel mm : 6.80
Tolerance mm : + 0.20

Rated speed rpm : 600

Pressure hPa : 430 rack travel mm : 10.90 Tolerance mm : +- 0.05

Pressure hPa : 220 rack travel mm : 7.85 Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1500 Rated speed rpm : 700 Del. quantity

cm3/1000 strokes :

Tolerance

cm3/1000 strokes : +- 3.0 Check tolerance

153.0

cm3/1000s. : +- 6.0

Aneroid pressure

hPa : Rated speed rpm : 1000
Del. quantity

cm3/1000 strokes : 92.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : +- 3.5

BREAKAWAY

Rack travel in mm : 11.25
Rated speed rpm : 1290
Tolerance 1/min : +- 5

LOW IDLE

Rated speed rpm 325 Del. quantity cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes 2.5 Check tolerance cm3/1000s. 5.0 Spreed Tolerance cm3/1000 strokes : 12.0 Check tolerance cm3/1000S.15.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

: 17,07,96 Edition : ISO 4113 Test oil

Combination No. : 0 402 046 875

Injection pump

Pump designation : PES6P110A320RS3329Z

EP type number : 9 412 016 744

Governor

Governer design. : RQV325...1250PA1251

Governer no. : 0 421 814 164

Cust. part No. : 1309376/0

Customer-spec. information Customer : DAF : NS156M Motor Power KW : 156.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C ÷ + 2.0 Tolerance °C

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 160 Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

rest pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm: 20.50 Tolerance mm : +- 0.50

Firing order : 1-5- 3- 6- 2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : + 0.30

Check

tolerance $^{\circ}NW$: + 0.50

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance "NW : +- 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 11.85

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 144	.0	Rated speed rpm : 1510 guide sleeve travel mm : 13.50
Tolerance cm3/1000 strokes : +- 1	.0	Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : + 4	.0	GUIDE SLEEVE POSITION
Spreed	‡	Rated speed rpm : 1370
Tolerance cm3/1000 strokes : 4	.0	Rack travel in mm : 10.85 Tolerance mm : +- 1.30
Check tolerance cm3/1000s. : 7	.5	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 325	+	Rated speed rpm : 1000 Aneroid pressure
Rack travel in mm : 4.	50	hPa : 1500 Del. quantity
Tolerance mm : +- 0.		cm3/1000 strokes : 144.0
Del. quantity	+	Tolerance
cm3/1000 strokes : 26 Tolerance	.0 1	cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000 strokes : +- 2	.5	cm3/1000s. : +- 4.0
Check tolerance	+	Spreed
cm3/1000s. : +- 5 Spreed	.0	Tolerance cm3/1000 strokes : 4.0
Tolerance	I	Check tolerance
cm3/1000 strokes : 12	.0 +	cm3/1000s. : 7.5
Check tolerance cm3/1000s. : 15	, †	
cm3/1000s. : 15	·• I	
	+	CONTROL LEVER
(B) SETTING OF INJECTION POWITH GOVERNOR	UMP ±	control lever
WITH GOVERNOR	Į	position degree : 123.0
	+	tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	†	RATED SPEED
Rated speed rpm : 325	Ţ	NATED STEED
guide sleeve	+	rack travel mm : 10.85
travel mm : 1.7 Tolerance mm : +- 0.7		Rated speed rpm : 1285 Tolerance 1/min : +- 5
Tolerance mm : +- 0.7	<u> </u>	Toterance Minn : +- 3
Rated speed rpm : 1298	+	rack travel mm : 4.00
guide sleeve travel mm : 10.7	25	Rated speed rpm : 1360 Tolerance 1/min : +- 15
travel mm : 10.7		Toterance Minn : += 13
TOTAL MAIN TOTAL	+	rack travel mm : 0.50
Rated speed rpm : 863	+	Tolerance mm : + 0.50
guide sleeve travel mm : 5.4	/ ₁	Rated speed rpm : 1500
Tolerance mm : +- 0.2		
Rated speed rpm : 520	+	LOW IDLE
guide sleeve travel mm : 3.0	D2 I	
Tolerance mm : +- 0.2		control lever position degree : 76.0

tolerance degree	: +- 4.0	+
Testing:		FUEL DELIVERY CHARACTERISTICS
Rated speed rpm rack travel mm Tolerance mm		Aneroid pressure hPa : 1500 Rated speed rpm : 700
Rated speed rpm	: 225	Del. quantity cm3/1000 strokes : 145.0
CRT mm min.	: > 6.00	Tolerance cm3/1000 strokes : +- 3.0
Rated speed rpm	: 375	- Check tolerance - cm3/1000s. : +- 6.0
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE	: 11.85 : ← 0.05 : 700 : 11.85 : ← 0.10 : 1250	Aneroid pressure hPa : - Rated speed rpm : 1000 Del. quantity cm3/1000 strokes : 94.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.5 BREAKAWAY Rack travel in mm : 10.85 Rated speed rpm : 1285 Tolerance 1/min : +- 5
COMPENSATOR TEST SETTING Rated speed rpm		
Pressure hPa rack travel mm	: 11.85	+ LOW IDLE
Tolerance mm	: +- 0.05	+ Rated speed rpm : 325 + Del. quantity
MEASUREMENT		cm3/1000 strokes : 26.0 Tolerance
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 600 : 7.35 : + 0.20	- cm3/1000 strokes : +- 2.5 - Check tolerance - cm3/1000s. : +- 5.0 - Spreed - Tolerance
Rated speed rpm	: 600	+ cm3/1000 strokes : 12.0
Pressure hPa rack travel mm Tolerance mm	: 370 : 10.75 : +- 0.05	+ Check tolerance - cm3/1000s. : 15.0
Pressure hPa rack travel mm Tolerance mm	: 200 : 8.40 : +- 0.10	End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 17.07.96 : ISO 4113

Combination No. : 0 402 046 876

Injection pump

Pump designation : PES6P110A320RS3329Y

EP type number : 0 412 016 756

Governor

Governer design. : RQV325...1250PA1251

Governer no. : 0 421 814 164

Cust. part No. : 1309375/0

Customer-spec. information Customer : DAF : NS133M Motor Power KW : 133.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0 temp. °C 40

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 160 Tolerance L/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 bar

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.25 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50

Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance

: +- 0.30

Check

tolerance °NW : +- 0.50

Start of delivery mark

Tolerance : +- 0.10

Check

: +- 0.75 tolerance °NW

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 11.85 Tolerance mm : +- 0.05

Del. quantity	+ Rated speed rpm : 1510
cm3/1000 strokes : 146.0	+ guide sleeve
	+ travel mm : 13.50
Tolerance	+ Tolerance mm : +- 0.50
cm3/1000 strokes : +- 1.0	T
Check tolerance	GUIDE SLEEVE POSITION
cm3/1000s. : +- 4.0	I GOIDE SELEVE FOSTITON
· · · · · · · · · · · · · · · · · · ·	Rated speed rpm : 1370
Spreed	+
Tolerance	Rack travel in mm: 10.85
cm3/1000 strokes : 4.0	+ Tolerance mm : +- 1.30
***************************************	+
Check tolerance cm3/1000s. : 7.5	FILL LOAD DELTHEDY AT FILL LOAD CTOD
cm3/1000s. : 7.5	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 325	Rated speed rpm : 1000
Nated Speed (pin : Ses	+ Aneroid pressure
	+ hPa : 1500
Rack travel in mm: 4.50	+ Del. quantity
Tolerance mm : + 0.10	+ cm3/1000 strokes : 146.0
Del. quantity	+ Tolerance
cm3/1000 strokes : 26.0	+ cm3/1000 strokes : +- 1.0
Tolerance	+ Check tolerance
cm3/1000 strokes : +- 2.5	+ cm3/1000s. : +- 4.0
Check tolerance	+ Spreed
cm3/1000s. : +- 5.0	+ Tolerance
Spreed	+ cm3/1000 strokes : 4.0
Tolerance	+ Check tolerance
cm3/1000 strokes : 12.0	+ cm3/1000s. : 7.5
Check tolerance cm3/1000s. : 15.0	†
cm3/1000s. ; 15.0	Ī
	T CONTROL LEVER
(B) SETTING OF INJECTION PUMP	- CONTINUE ELEVEN
WITH GOVERNOR	+ control lever
	+ position degree : 123.0
	tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	+
	+ RATED SPEED
Rated speed rpm : 325	†
guide sleeve	rack travel mm : 10.85
travel mm : 1.25	+ Rated speed rpm : 1285 + Tolerance 1/min : +- 5
Tolerance mm : +- 0.20	+ Tolerance 1/min : +- 5
Rated speed rpm : 1298	rack travel mm : 4.00
guide sleeve	Rated speed rpm : 1360
travel mm : 10.25	+ Tolerance 1/min : + 15
Tolerance mm : +- 0.15	+
	rack travel mm : 0.50
Rated speed rpm : 863	+ Tolerance mm : +- 0.50
guide sleeve	+ Rated speed rpm : 1500
travel mm : 5.41	+
	1
Tolerance mm : +- 0.25	†
	†
Rated speed rpm : 520	LOW IDLE
Rated speed rpm : 520 guide sleeve	LOW IDLE
Rated speed rpm : 520 guide sleeve travel mm : 3.02	+
Rated speed rpm : 520 guide sleeve	LOW IDLE control lever position degree : 76.0

tolerance degree	: +- 4.0
Testing:	
Rated speed rpm	: 325
rack travel mm	: 4.50
Tolerance mm	: 4.50 : +- 0.10
Rated speed rpm	: 225
CRT mm min.	: > 6.00
Rated speed rpm	: 375
TORQUE CONTROL	
Rated speed rpm	: 1000
rack travel mm	: 11.85
Tolerance mm	: +- 0.05
Rated speed rpm	: 700 : 11.85
rack travel mm	: 11.85
Tolerance mm	: - 0.10
Rated speed rpm	: 1250
Rated speed rpm rack travel mm	: 1250 : 11.85
rack travel mm Tolerance mm	: 1250 : 11.85 : + 0.10
rack travel mm	: 1250 : 11.85 : + 0.10
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING	: 11.85 : +- 0.10
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm	: 11.85 : +- 0.10
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm	: 11.85 : +- 0.10 : 600 : 1500 : 11.85
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa	: 11.85 : +- 0.10 : 600 : 1500
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm	: 11.85 : +- 0.10 : 600 : 1500 : 11.85
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa	: 11.85 : + 0.10 : 600 : 1500 : 11.85 : + 0.05
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm	: 11.85 : + 0.10 : 600 : 1500 : 11.85 : + 0.05
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm	: 11.85 : + 0.10 : 600 : 1500 : 11.85 : + 0.05
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm	: 11.85 : + 0.10 : 600 : 1500 : 11.85 : + 0.05
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm	: 11.85 : + 0.10 : 600 : 1500 : 11.85 : + 0.05
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 11.85 : +- 0.10 : 600 : 1500 : 11.85 : +- 0.05 : 600 : 6.50 : +- 0.20 : 600
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 11.85 : +- 0.10 : 600 : 1500 : 11.85 : +- 0.05 : 0.20 : 600 : 6.50 : +- 0.20 : 600 : 310 : 10.55
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 11.85 : +- 0.10 : 600 : 1500 : 11.85 : +- 0.05 : 600 : 6.50 : +- 0.20 : 600
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 11.85 : + 0.10 : 600 : 1500 : 11.85 : + 0.05 :
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Pressure hPa Rated speed rpm rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 11.85 : + 0.10 : 600 : 1500 : 11.85 : + 0.05 : 600 : 6.50 : + 0.20 : 600 : 10.55 : + 0.05

FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1500 : 700
Del. quantity cm3/1000 strokes	: 147.5
Tolerance cm3/1000 strokes Check tolerance	: +- 3.0
cm3/1000s.	: +- 6.0
Aneroid pressure hPa	: -
Rated speed rpm Del. quantity	: 1000
cm3/1000 strokes Tolerance	: 83.0
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s.	: +- 3.5
BREAKAWAY	— <u></u>
Rack travel in mm Rated speed rpm Tolerance 1/min	: 10.85 : 1285 : +- 5
LOW IDLE	
Rated speed rpm Del. quantity	: 325
cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 26.0
	: +- 2.5
	: +- 5.0
Spreed	
	: 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 16.07.96 : ISO 4113

Combination No. : 0 402 076 798

Injection pump

Pump designation : PES6P120A720RS3371

EP type number : 0 412 026 791

Governor

Governer design. : RSV450...1000P5A637

: -1

Governer no. : 0 421 833 549

Cust. part No. :

Customer—spec. information Customer : IVECO-FIAT Motor : 8365.26.540

Power KW : 136.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 034

Inlet press. bar : 2.5

Overflow quantity

min. l/h : 230 Tolerance l/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.55
Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance $^{\circ}NW$: +- 0.50

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 9.55 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 128.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

	+
Spreed Tolerance cm3/1000 strokes : 5.0	CONTROL LEVER control lever
Check tolerance cm3/1000s. : 9.0	position degree : 99.0 tolerance degree : +- 4.0
Rated speed rpm : 450	RATED SPEED
Rack travel in mm : 4.60 Tolerance mm : +- 0.10 Del. quantity	rack travel mm : 8.50 Rated speed rpm : 1070 Tolerance 1/min : +- 5
cm3/1000 strokes : 20.0 Tolerance	rack travel mm : 4.00 Rated speed rpm : 1110
cm3/1000 strokes : + 3.0 Check tolerance	Tolerance 1/min : +- 15
cm3/1000s. : +- 6.0 Spreed Tolerance	+ rack travel mm : 0.85 + Tolerance mm : + 0.55 + Rated speed rpm : 1400
cm3/1000 strokes : 8.0 Check tolerance	rack travel mm : 4.00
cm3/1000s. : 12.0	+ Rated speed rpm : 1120
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
	t control lever
GUIDE SLEEVE POSITION	+ position degree : 75.0 + tolerance degree : +- 4.0
Rated speed rpm : 800 Rack travel in mm : 0.50	Setting point w/out bumper spring
Tolerance mm : + 0.20	Rated speed rpm : 450 rack travel mm : 4.10
governor spring pre-tension click setting x : 3.50	Testing: Rated speed rpm : 450
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 450 rack travel mm : 4.60 Tolerance mm : +- 0.10
Rated speed rpm : 1000 Aneroid pressure	rack travel mm : 2.00 Rated speed rpm : 580
hPa : 1200 Del. quantity cm3/1000 strokes : 128.0	Tolerance 1/min : +- 50
<pre>cm3/1000 strokes : 128.0 Tolerance cm3/1000 strokes : +- 1.0</pre>	TORQUE CONTROL
Check tolerance cm3/1000s. : +- 4.0 Spreed	Rated speed rpm : 1000 rack travel mm : 9.55 Tolerance mm : +- 0.05
Tolerance cm3/1000 strokes : 5.0	+ Rated speed rpm : 700 + rack travel mm : 9.60
Check tolerance cm3/1000s. 9.0	+ rack travel mm : 9.60 + Tolerance mm : + 0.10

Rated speed rpm rack travel mm Tolerance mm	700
	: 320 : 10.20 : +- 0.30
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 9.55 : + 0.10
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 9.10 : +- 0.15
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 425 : 9.35 : + 0.05
FUEL DELIVERY CHA	
Aneroid pressure hPa Rated speed rpm	: 1200 : 700
Del. quantity	: 122.0
cm3/1000 strokes	. 7.6
Tolerance cm3/1000 strokes	: +- 3.0
Tolerance	: +- 6.0
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: +- 6.0 : -
Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: +- 6.0 : - : 500

Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 9.10

Rated speed rpm : 100
rack travel mm : 9.10
Tolerance mm : +- 0.30
Del. quantity
cm3/1000 strokes : 90.0
Tolerance
cm3/1000 strokes : +- 15.0
Check tolerance
cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 450
Del. quantity
cm3/1000 strokes : 20.0
Tolerance
cm3/1000 strokes : +- 3.0
Check tolerance
cm3/1000s. : +- 6.0
Spreed
Tolerance
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000s. : 12.0

End of test specification sheet

Rack travel in mm :

Rated speed rpm : 1070

8.50

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 16.07.96 Edition Test oil : ISO 4113

Combination No. : 0 402 648 374

Injection pump

Pump designation : PE8P120A720LS7189

: -10

EP type number : 0 412 628 893

Governor

Governer design. : RQV200...950PA736-8

Governer no. : 0 421 813 815

Cust. part No. : 1303811

Customer-spec. information Customer : SCANIA : DSC14 10 Motor

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Vibration damper

(RoBo diaphragm) : 3.2

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5
Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

bar : 251.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.05 Tolerance mm : + 0.05 Check tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-2-7-3-4 : - 5- 6- 8

: 0-45-90-135-180 Phasing : -225-270-315

: +- 0.30 Tolerance

Check

tolerance °NW : +- 0.50

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 13.05 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 238.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

: +- 4.0 cm3/1000s.

الم ـ ـ ـ ـ ما		and I laws	
Spreed	†	control lever	. (0.0
Tolerance	<u>, </u>	position degree	
cm3/1000 strokes	: 8.0	tolerance degree	: +- 4.0
Check tolerance		control lever	
	. 42.0		. 0/ 0
cm3/1000s.	: 12.0	position degree	
		tolerance degree	: +- 4.0
Rated speed rpm	: 250 +		
	†	RATED SPEED	
Dardi Americal de esc	. / 50	mode through mm	: 12.00
Rack travel in mm		rack travel mm	: 995
Tolerance mm	: + 0.10	Rated speed rpm	
Del. quantity	1/2	Tolerance 1/min	: +- 5
cm3/1000 strokes	: 16.0	west Assessed was	. / 00
Tolerance	·	rack travel mm	
cm3/1000 strokes	: +- 3.0 +	Rated speed rpm	
Check tolerance	†	Tolerance 1/min	: +- 15
· · · ·	: + 6.0 +	1	0.50
Spreed	+	rack travel mm	: 0.50
Tolerance	. <u>.</u> †	Tolerance mm	: +- 0.50
cm3/1000 strokes	: 4.0 +	Rated speed rpm	: 1250
Check tolerance	<u> </u>		
cm3/1000s.	: 8.0		
	†	1011 701 5	
(B) AFTTING OF THE	TECTTON DUMP	LOW IDLE	
(B) SETTING OF INJ	TECTION PUMP		
WITH GOVERNOR	†		
	†	control lever	15.0
	†	position degree	
0		tolerance degree	: +- 4.0
GUIDE SLEEVE POSIT	TON	control lover	
Section 1 and 1 man	1450	control lever	. 11 0
Rated speed rpm	: 1150 +	position degree	
Basis Americal des em	. 0.50	tolerance degree	: +- 4.0
Rack travel in mm	1	Testing:	
Tolerance mm	: +- 2.50 +	resting:	
	T	Rated speed rpm	: 250
ELLI LOAN NELTVERY	AT FULL LOAD STOP	rack travel mm	: 4.50
FULL LUAD DELIVERT	AT FOLL LOAD STOP	Tolerance mm	: +- 0.10
Rated speed rpm	: 700	IOCEI GLICE HHI	0.10
Aneroid pressure	· '00	Rated speed rpm	: 150
hPa	. <u> </u>	varen sheen i hill	. 150
nea Del. quantity	·	CRT mm min.	•> 5.80
cm3/1000 strokes	. 238 0	VIV. 11111 (11111)	
Tolerance	· 250.0	Rated speed rpm	: 275
cm3/1000 strokes	: +- 1.0	vared sheed thin	. 213
Check tolerance	· · · · · · · · · · · · · · · · · · ·		
cm3/1000S.	: +- 4.0	TORQUE CONTROL	
	. ' - 4.0	TORGUE CONTROL	
Spreed	Ť	Rated speed rpm	: 700
Tolerance	: 8.0	rack travel mm	
cm3/1000 strokes	• •••	Tolerance mm	
Check tolerance	: 12.0	TOTEL GLICE (IIII)	. , 0.05
cm3/1000s.	: 12.0	Dated speed now	: 950
	†	Rated speed rpm	. 770
	T	rack travel mm	: +- 0.05
CONTROL LEVES		Tolerance mm	. +- 0.05
CONTROL LEVER	†		
	+		

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 13.05
Tolerance mm : +- 0.05

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 10.00
Tolerance mm : +- 0.20

Rated speed rpm : 500

Pressure hPa : 525 rack travel mm : 11.75 Tolerance mm : + 0.05

Pressure hPa : 320 rack travel mm : 10.50 Tolerance mm : +- 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 950
Del. quantity
cm3/1000 strokes : 224.0

Tolerance

cm3/1000 strokes : +- 4.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPa : Rated speed rpm : 500
Del. quantity

cm3/1000 strokes : 144.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

BREAKAWAY

Rack travel in mm : 12.00

Rated speed rpm : 995
Tolerance 1/min : +-

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 10.00
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 155.0
Tolerance

cm3/1000 strokes : +- 20.0 Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 250 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s.6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s.8.0

End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.07.96 Test oil : ISO 4113

Combination No. : 0 402 736 857

Injection pump

Pump designation : PES6P110A120RS7263

EP type number : 0 412 716 808

Governor

Governer design. : RQV350...1250PA964

: -27K

: 0 421 815 427 Governer no.

Cust. part No. : 3282462

Customer-spec. information : CUMMINS Customer Motor : 6BTAA Power KW : 154.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 har Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

J05

x inside diameter: 2.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 4.40 : +- 0.05 Tolerance mm Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.50

Start of delivery blocking

*NW after s.o.d. : 6.50 : +- 0.50 Tolerance

Check

: +- 0.75 tolerance °NW

1 Barrel no.

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 13.85 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes :

+	Check tolerance
Tolerance cm3/1000 strokes : +- 1.0	cm3/1000s. : 9.0
Check tolerance cm3/1000s. : +- 4.0	CONTROL LEVER
Spreed Tolerance cm3/1000 strokes : 5.0	control lever position degree : 63.0 tolerance degree : +- 4.0
Check tolerance cm3/1000s. : 9.0	control lever position degree : 121.0 tolerance degree : + 4.0
Rated speed rpm : 350	RATED SPEED
Rack travel in mm : 5.00 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 26.0	rack travel mm : 13.50 Rated speed rpm : 1310 Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : +- 3.0 check tolerance cm3/1000s. : +- 5.0	rack travel mm : 4.00 Rated speed rpm : 1450 Tolerance 1/min : +- 15
Spreed Tolerance 7.0 Check tolerance	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1600
cm3/1000s. : 11.0	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
	control lever position degree : 72.0 tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	control lever
Rated speed rpm : 1440	position degree : 17.0 tolerance degree : +- 4.0
Rack travel in mm: 9.00 + Tolerance mm: + 3.00 +	Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 350 rack travel mm : 5.00
T	Tolerance mm : +- 0.10
Rated speed rpm : 1100 Aneroid pressure	Rated speed rpm : 250
Aneroid pressure hPa : 1200 Del. quantity	
Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 152.0 Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 250
Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 152.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0	Rated speed rpm : 250 CRT mm min. : > 6.50
Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 152.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	Rated speed rpm : 250 CRT mm min. : > 6.50 Rated speed rpm : 375

		+ Del. quantity	
Rated speed rpm	. 750	cm3/1000 strokes : 151.0	
rack travel mm	. 12 /0	Tolerance	
Tolerance mm	. 12.40	$\frac{1}{4}$ cm3/1000 strokes : +- 3.0	
rocerance min	. +- 0.10	Check tolerance	
Pated speed pam	. 1250	cm3/1000s. : +- 6.0	
Rated speed rpm	: 14.50	Spreed	
rack travel mm Tolerance mm	: +- 0.10	+ Tolerance	
roterance mm	: +- 0.10	+ cm3/1000 strokes : 8.0	
Date of annual con-	. /00		
Rated speed rpm	. 400	+ Check tolerance + cm3/1000s. : 12.0	
rack travel mm	11.00	+ cm3/1000s. : 12.0	
Tolerance mm	: +- 0.15	T Amonorid magazine	
		+ Aneroid pressure	
ANDROTO (AL TITUDE		+ hPa : - Rated speed rpm : 500	
ANEROID/ALTITUDE			
COMPENSATOR TEST		+ Del. quantity + cm3/1000 strokes : 116.0	
		Tolerance	
CETTING		+ cm3/1000 strokes : +- 1.0	
SETTING			
Data dama a la como	. 4250	+ Check tolerance + cm3/1000s. : +- 4.0	
Rated speed rpm Pressure hPa	: 1250	+ cm3/10008. : +- 4.0	
rressure nra rack travel mm	1/.50	I	
Tolerance mm	14.50	I BREAKAWAY	
rocerance limi	. 1 0.10	DICENTANA	
MEASUREMENT		<u> </u>	
FIEAGOREFIER		Rack travel in mm: 13.50	
Pressure hPa	• -	+ Rated speed rpm : 1310	
Rated speed rpm	1250	+ Tolerance 1/min : +- 5	
rack travel mm	• 9 35	Total allocations and a second allocations and a second allocations are a second allocations and a second allocations are	
rack travel mm Tolerance mm	· +- 0.20	1	
TOCCI GITCC HAIT	0.20		
Rated speed rpm	: 1250		
		+	
Pressure hPa	: 570	+ Rated speed rpm : 100	
rack travel mm	: 11.30	rack travel mm : 12.50	
Tolerance mm	: +- 0.20	+ Tolerance mm : +- 0.50	
······		+ Del. quantity	
Pressure hPa	: 775	+ cm3/1000 strokes : 155.0	
rack travel mm	: 13.15	+ Tolerance	
Tolerance mm	: +- 0.05	+ cm3/1000 strokes : +- 20.0	
		+ Check tolerance	
		+ cm3/1000s. : +- 24.0	
START CUT-OUT		†	
<u> </u>		†	
Rated speed rpm	: > 100	†	
Rated speed rpm	: < 270	101 7015	
Ob and		+ LOW IDLE	
Check		Dated aread are a 750	
speed 1/min	: > 80	Rated speed rpm : 350	
Check		+ Del. quantity + cm3/1000 strokes : 26.0	
speed 1/min	: < 290	Tolerance	
FUEL DELIVERY CHA	ADACTEDICTICS	Check tolerance	
LOEF DEFINERS CHA	AKMC I EK 13 I 1 C3	- cm3/1000s. : +- 5.0	
Anenoid process		- Spreed	
Aneroid pressure	: 1200	Tolerance	
hPa Batad speed nom	: 750	- cm3/1000 strokes : 7.0	
Rated speed rpm	. 730	T CIII 7 1000 SCI OKES . 7.0	
		T	

Check tolerance cm3/1000s.	:	11.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.07.96 Test oil : ISO 4113

Combination No. : 0 402 746 603

Injection pump

Pump designation : PES6P120A320RS7359

EP type number : 0 412 726 925

Governor

Governer design. : RQ300/1050PA999-7

Governer no. : 0 421 801 799

Cust. part No. : CCEP 5153 66-224

Customer-spec. information

Customer : RENAULT V.I.
Motor : MIHRO62045 A41

Power KW : 188.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

atside diameter .

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.70
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.25 Tolerance mm : +- 0.75

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30 Check

tolerance °NW : +- 0.50

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 12.30 Tolerance mm : + 0.05

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 191.0

Tolerance cm3/1000 strokes : +- 1.0	† Tolerance mm : +- 0.10
	Rated speed rpm : 1380
Check tolerance cm3/1000s. : +- 4.0	+ guide sleeve + travel mm : 11.50
Cilist (0005: 4.0	† Tolerance mm : +- 0.50
Spreed	+
Tolerance 5.0	CUIDE OF FELLE DOOTTON
cm3/1000 strokes : 5.0	GUIDE SLEEVE POSITION
Check tolerance	Rated speed rpm : 800
cm3/1000s. : 9.0	†
Rated speed rpm : 275	+ Rack travel in mm : 20.00 + Tolerance mm : +- 0.80
Rated Speed rpm : 273	Toterance man . += 0.00
Rack travel in mm: -5.90	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : +- 0.10 Del. quantity	Rated speed rpm : 600
cm3/1000 strokes : 37.0	Aneroid pressure
Tolerance	† hPa : 1000
cm3/1000 strokes : +- 2.0	+ Del. quantity
Check tolerance cm3/1000s. : +- 5.0	+ cm3/1000 strokes : 191.0 + Tolerance
Spreed	cm3/1000 strokes : +- 1.0
Tolerance	† Check tolerance
cm3/1000 strokes : 8.0	+ cm3/1000s. : + 4.0
Check tolerance cm3/1000s. : 12.0	+ Spreed + Tolerance
cm3/1000s. : 12.0	+ cm3/1000 strokes : 5.0
	+ Check tolerance
(B) SETTING OF INJECTION PUMP	+ cm3/1000s. : 9.0
WITH GOVERNOR	Ī
GUIDE SLEEVE TRAVEL	+ CONTROL LEVER +
Rated speed rpm : 275	- control lever
guide steeve	position degree : 276.0
travel mm : 1.75 Tolerance mm : +- 0.20	+ tolerance degree : +- 4.0
TOTAL THE TIME	RATED SPEED
Rated speed rpm : 1145	+
guide sleeve	+ rack travel mm : -1.00 + Rated speed rpm : 1115
travel mm : 6.55 Tolerance mm : + 0.15	+ Tolerance 1/min : +- 15
	+
Rated speed rpm : 1050	+ rack travel mm : -8.30
guide sleeve travel mm : 6.00	+ Rated speed rpm : 1255 + Tolerance 1/min : +- 5
Tolerance mm : +- 0.10	Totel ance 1711/11
	rack travel mm : -11.80
Rated speed rpm : 594	+ Tolerance mm : +- 0.50
guide sleeve travel mm : 5.11	Rated speed rpm : 1375
Tolerance mm : + 0.10	+
Rated speed rpm : 720	+ LOW IDLE
guide sleeve travel mm : 6.00	Ţ
	•

		+		
control lever position degree tolerance degree Testing:	: 255.0 : + 4.0	+ Check	nin : >	80 215
Rated speed rpm rack travel mm Tolerance mm	: 275 : -5.90	+	IVERY CHARACT	ERISTICS
rack travel mm Rated speed rpm Tolerance 1/min	: -10.30 : 520	+ Del. quan	eed rpm :	
Rated speed rpm		Tolerance cm3/1000	e strokes : +	
CRT mm min.	: > -4.00	+ Check tol + cm3/1000s	Lerance S. : +	- 6.0
TORQUE CONTROL Rated speed rpm	: 600	L Del quan	eed rpm :	- 500
Tolerance mm	: + 0.05	+ cm3/1000 + Tolerance	strokes :	
Rated speed rpm Tolerance mm	: 1050 : +- 0.10	+ Check tol	strokes : + erance }. : +	
ANEROID/ALTITUDE COMPENSATOR TEST		BREAKAWAY	,	
SETTING		† Rack trav Rated spe	vel in mm :	-1.00 1115
Rated speed rpm Pressure hPa	: 500 : 1000	Tolerance		_ 15
MEASUREMENT		- STARTING	FUEL DELIVER	Y
Pressure hPa Rated speed rpm rack travel mm	: - : 500 : -1.25	Rated spe		100
Tolerance mm	: ← 0.20 : 500	+ Tolerance		155.0 - 15.0
Rated speed rpm Pressure hPa	: 500 : 220	+ Cm3/1000 + Check tol + cm3/1000s	erance	- 19.0
rack travel mm Tolerance mm	: -0.35 : +- 0.15		•	
Pressure hPa rack travel mm Tolerance mm	: 160 : −0.75 : ← 0.05		ed rpm :	275
START CUT-OUT		———	tity strokes :	
Rated speed rpm Rated speed rpm		+ Tolerance + cm3/1000	strokes : +	- 2.0

Check tolerance cm3/1000s. : +- 5.0

Spreed Tolerance cm3/1000 strokes : 8.0

Check tolerance cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.07.96 Test oil : ISO 4113

Combination No. : 0 402 746 645

Injection pump

Pump designation : PES6P120A320RS7364 EP type number : 0 412 726 930

Governor

Governer design. : RQV300...1050PA1204

Governer no. : 0 421 814 123

Cust. part No. : CCEP 5148A 66-236

Customer-spec. information

Customer : RENAULT V.I.
Motor : MIDR 06.20.45D41

Power KW : 219.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm: : 4.55 Tolerance mm: : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.25 Tolerance mm : + 0.75

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance $^{\circ}NW$: +- 0.50

Start of delivery mark

°NW after s.o.d. : -0.40 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 13.70

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 282.0

	t guido al covo
Tolerance	_ + guide sleeve - + travel mm : 3.28
cm3/1000 strokes : + 1.0	Tolerance mm : + 0.25
Check tolerance cm3/1000s. : +- 4.0	Rated speed rpm : 460 guide sleeve
	+ travel mm : 3.86
Spreed Tolerance	Tolerance mm : +- 0.25
cm3/1000 strokes : 5.0	Rated speed rpm : 1460 guide sleeve
Check tolerance : 9.0	travel mm : 11.50 Tolerance mm : +- 0.50
Rated speed rpm : 300	†
Rated speed rpm : 300	GUIDE SLEEVE POSITION
Rack travel in mm : -7.40 Tolerance mm : + 0.10	Rated speed rpm : 1230
Del. quantity	Rack travel in mm : 11.70
cm3/1000 strokes : 26.0 Tolerance	Tolerance mm : + 1.30
cm3/1000 strokes : +- 2.0	+
Check tolerance cm3/1000s. : +- 5.0	+ FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : +- 5.0 Spreed	Rated speed rpm : 600
Tolerance	+ Aneroid pressure
cm3/1000 strokes : 8.0	+ hPa : 1000
Check tolerance	+ Del. quantity
cm3/1000s. : 12.0	+ cm3/1000 strokes : 282.0 + Tolerance
	+ cm3/1000 strokes : +- 1.0
(B) SETTING OF INJECTION PUMP	- Check tolerance
WITH GOVERNOR	+ cm3/1000s. : +- 4.0
	+ Spreed + Tolerance
GUIDE SLEEVE TRAVEL	+ cm3/1000 strokes : 5.0
	- Check tolerance
Rated speed rpm : 300	+ cm3/1000s. : 9.0
guide sleeve travel mm : 1.33	I
Tolerance mm : +- 0.25	
	CONTROL LEVER
Rated speed rpm : 1135	t control lever
guide sleeve travel mm : 8.45	position degree : 303.0
Tolerance mm : +- 0.25	tolerance degree : +- 4.0
Rated speed rpm : 752 guide sleeve	RATED SPEED
travel mm : 6.09	rack travel mm : -1.00
Tolerance mm : +- 0.25	Rated speed rpm : 1140 Tolerance 1/min : +- 5
Rated speed rpm : 365 guide sleeve	rack travel mm : -9.70
travel mm : 2.40	+ Rated speed rpm : 1310
Tolerance mm : + 0.25	† Tolerance 1/min : +- 15
Rated speed rpm : 415	t rack travel mm : -13.20 Tolerance mm : +- 0.50
	+ Tolerance mm : +- 0.50

	: 1400	Rated speed rpm : > 100 Rated speed rpm : < 230
OW IDLE		Check
		+ speed 1/min : > 80
		+ Check
ntrol lever	0.7	+ speed 1/min : < 250
sition degree		†
lerance degree	: +- 4.0	5.15. 25. 5.152. 21.252. 21.252.
		fuel delivery characteristics
esting:		Aneroid pressure
ited speed rpm	: 300	hPa : 1000
ick travel mm		Rated speed rpm : 1050
lerance mm		Del. quantity
TO GLICE HAII	0.10	cm3/1000 strokes : 290.0
ited speed rpm	• 200	Tolerance
ted speed rpill	. 200	cm3/1000 strokes : +- 3.0
RT mm max.	: < -4.90	Check tolerance
· WHI HOA	7.70	cm3/1000s. : +- 6.0
ted speed rpm	: 360	1 0.00
tou specu (pill	. 500	Aneroid pressure
		hPa : -
RQUE CONTROL		+ Rated speed rpm : 500
		+ Del. quantity
ted speed rpm	: 600	+ cm3/1000 strokes : 163.0
opeca (pm		+ Tolerance
ed speed rpm	: 1050	+ cm3/1000 strokes : +- 1.0
Lerance mm	: +- 0 10	Check tolerance
C. GINCE IIRII		cm3/1000s. : +- 4.0
EROID/ALTITUDE		+
MPENSATOR TEST		BREAKAWAY
		†
		†
TTING		+ Rack travel in mm : -1.00
		+ Rated speed rpm : 1140
ted speed rpm		Tolerance 1/min : + 5
ssure hPa	: 1000	†
ACHDEMENT		İ
ASUREMENT		STARTING FUEL DELIVERY
essure hPa	• _	TANTING FOLL PELIVENT
ted speed rpm	: 500	Rated speed rpm : 100
ck travel mm	: -2.50	rack travel mm : 20.25
lerance mm	: +- 0.20	+ Tolerance mm : +- 0.75
C. GITCE HAIT	0.20	Del. quantity
ted speed rpm	: 500	cm3/1000 strokes : 145.0
eu speeu ryn	• 200	Tolerance
essure hPa	: 240	cm3/1000 strokes : +- 15.0
	: -1.45	Check tolerance
k travel mm	: +- 0.15	+ cm3/1000s. : +- 19.0
erance mm	. +- 0.13	T CIIIJ/10003 +- 19.0
essure hPa	: 400	\perp
ck travel mm	: -0.50	1
erance mm	: +- 0.05	
FIGUE MII	0.07	LOW IDLE
CUT-OUT		Rated speed rpm : 300
(

Del. quantity cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 27,02,95 : ISO 4113

Combination No. : 0 402 746 964

Injection pump

Pump designation : PES6P120A320RS7317

EP type number : 0 412 726 903

Governor

Governer design. : RQV275...1000PA1001

Governer no. : 0 421 813 931

Cust. part No. : CCEP 5111B 66-181

Customer-spec. information

Customer Motor

: RVI : MIDR 062045 E/3

Power KW

: 249.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 071

Inlet press. bar :

2.5

Tolerance bar

: 2.5 : + 0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

208.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: x length mm

3.0 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

4.70 Prestroke mm : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 18.00 : +- 0.50

Tolerance mm

Firing order

: 1-5-3-6-2-

4.0

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.30

Check

tolerance "NW : +- 0.50

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 13.90

: +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 269.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.: +-

	† Tolerance mm : +- 0.20
Spreed	+ 2770
Tolerance	+ Rated speed rpm : 1370
cm3/1000 strokes : 5.0	<pre>guide sleeve travel mm : 11.50</pre>
Check tolerance	+ travel mm : 11.50 + Tolerance mm : +- 0.50
cm3/1000s. : 9.0	1 Toterance iiiii . + 0.50
CIID7 (0003 7.0	I
Rated speed rpm : 275	GUIDE SLEEVE POSITION
	+
	+ Rated speed rpm : 1165
Rack travel in mm : -8.10	+
Tolerance mm : +- 0.10	+ Rack travel in mm: 12.90
Del. quantity	+ Tolerance mm : + 1.30
cm3/1000 strokes : 34.0	†
Tolerance cm3/1000 strokes : +- 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	T FOLL EOAD DELIVERY AT FOLL LOAD STOP
cm3/1000s. : +- 5.0	Rated speed rpm : 600
Spreed	+ Aneroid pressure
Tolerance	+ hPa : 1000
cm3/1000 strokes : 8.0	+ Del. quantity
Check tolerance	+ cm3/1000 strokes : 269.0
cm3/1000s. : 12.0	+ Tolerance
	+ cm3/1000 strokes : +- 1.0
(a) OFFERING OF THE STREET OF THE	Check tolerance
(B) SETTING OF INJECTION PUMP	cm3/1000s. : +- 4.0
WITH GOVERNOR	+ Spreed + Tolerance
	+ cm3/1000 strokes : 5.0
GUIDE SLEEVE TRAVEL	Check tolerance
GOIDE SEELAE LIVATE	+ cm3/1000s. : 9.0
Rated speed rpm : 275	+
guide sleeve	+
travel mm : 1.29	
Tolerance mm : +- 0.10	+ CONTROL LEVER
	†
Rated speed rpm : 1096	+ control lever
guide sleeve travel mm : 8.56	<pre>position degree : 303.0 tolerance degree : +- 4.0</pre>
	Loterance degree : +- 4.0
Tolerance mm : +- 0.10	RATED SPEED
Rated speed rpm : 777	1
guide sleeve	← rack travel mm : −1.00
travel mm : 6.11	+ Rated speed rpm : 1080
Tolerance mm : +- 0.20	+ Tolerance 1/min : +- 5
	†
Rated speed rpm : 343	+ rack travel mm : -9.90
guide sleeve	Rated speed rpm : 1220
travel mm : 2.33	Tolerance 1/min : + 15
Tolerance mm : +- 0.20	+ rack travel mm : -13.40
Rated speed rpm : 393	+ Tolerance mm : +- 0.55
guide sleeve	Rated speed rpm : 1300
travel mm : 2.99	+
Tolerance mm : + 0.20	+
	+
Rated speed rpm : 490	LOW IDLE
guide sleeve	†
travel mm : 3.81	+

control lever position degree	: 248.0	Check speed 1/min : > 80
tolerance degree Testing:	: +- 4.0	+ Check + speed 1/min : < 245 +
Rated speed rpm	: 275	FUEL DELIVERY CHARACTERISTICS
rack travel mm Tolerance mm	: +- 0.10	Aneroid pressure hPa : 1000
Rated speed rpm	: 200	Rated speed rpm : 1000 Del. quantity
CRT mm max.	: < -6.60	cm3/1000 strokes : 248.0 Tolerance
Rated speed rpm	: 340	cm3/1000 strokes : +- 3.0 + Check tolerance + cm3/1000s. : +- 6.0
TORQUE CONTROL		+
Rated speed rpm	: 600	Aneroid pressure hPa : 1000
Rated speed rpm Tolerance mm	: 1000	Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 109.0
		Tolerance - cm3/1000 strokes : +- 5.0
Rated speed rpm rack travel mm	: -5.50	Check tolerance + cm3/1000s. : +- 8.0
ANEROID/ALTITUDE		+ Spreed + Tolerance
COMPENSATOR TEST		cm3/1000 strokes : 8.0 Check tolerance
SETTING		+ cm3/1000s. : 12.0
Rated speed rpm	: 500	+ Aneroid pressure + hPa : -
Pressure hPa	: 1000	Rated speed rpm : 500 Del. quantity
MEASUREMENT		+ cm3/1000 strokes : 130.0 + Tolerance
Pressure hPa Rated speed rpm rack travel mm		+ cm3/1000 strokes : +- 1.0 + Check tolerance + cm3/1000s. : +- 4.0
Tolerance mm		
Rated speed rpm	: 500	BREAKAWAY
Pressure hPa rack travel mm Tolerance mm	: 200 : -3.60 : +- 0.15	Rack travel in mm: -1.00 Rated speed rpm: 1080 Tolerance 1/min: +- 5
Pressure hPa rack travel mm Tolerance mm	: -0.75	Toterance 1/111111 : == 3
		STARTING FUEL DELIVERY
START CUT-OUT		Del. quantity cm3/1000 strokes : 155.0
Rated speed rpm Rated speed rpm		+ Tolerance + cm3/1000 strokes : +- 15.0

Check tolerance cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 275 Del. quantity cm3/1000 strokes : 34.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 5.0 : +-Spreed Tolerance 8.0 cm3/1000 strokes : Check tolerance cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 16.07.96 : ISO 4113

Combination No.

: 0 402 746 995

Injection pump

Pump designation : PES6P120A320RS7343

EP type number : 0 412 726 915

Governor

Governer design. : RQV300...1000PA1160K

Governer no.

: 0 421 815 420

Cust. part No. : CCEP 5144A 66-232

Customer-spec. information

Customer : RENAULT V.I.

: MIDR 062356 A/41 Motor

: 280.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 071

Inlet press. bar : 2.5

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.50 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 11.00

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

: +- 0.30 Tolerance

Check

: +- 0.50 tolerance °NW

Start of delivery mark

*NW after s.o.d. : -0.15

: +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

: 1 Barrel no.

Beginning of delivery differende

betw. rack trav.

21.00

and maximum rack

11.00 travel : 11.00 Difference * CS : 2.25

BASIC SETTING

Rated speed rpm : 1000	+
والمساور وال	Rated speed rpm : 405
David Americal Services 42 90	guide sleeve
Rack travel in mm : 12.80 Tolerance mm : +- 0.05	travel mm : 2.43
Tolerance mm : +- 0.05	Tolerance mm : +- 0.25
Dol minutitie	† Rated speed rpm : 455
Del. quantity cm3/1000 strokes : 350.0	· · ·
Cm5/1000 Strokes : 550.0	+ guide sleeve + travel mm : 2.98
Talanana	+ Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : + 1.0	Toterance inin : +- 0.25
cm3/1000 strokes : + 1.0	T Rated speed rpm : 550
Charle talanana	· · ·
Check tolerance cm3/1000s. : +- 4.0	+ quide sleeve + travel mm : 3.66
cm3/1000s. : +- 4.0	+ travel mm : 3.66 + Tolerance mm : +- 0.25
Connect	Toterance iiii : + 0.25
Spreed	T Dated around non a 1//D
Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 1440
CIND/ (UUU STrokes ; 5.0	+ guide sleeve + travel mm : 13.50
Chark tolonance	+ Tolerance mm : + 0.50
Check tolerance cm3/1000s. : 9.0	
CIII37 (UUU3. : 7.U	I
Rated speed rpm : 300	GUIDE SLEEVE POSITION
Rated speed rpm : 300	T GOIDE SLEEVE FOSITION
	Rated speed rpm : 1300
Rack travel in mm : -7.80	T Kateu speeu rpm . 1500
Tolerance mm : +- 0.10	T H Rack travel in mm : 11.60
	+ Tolerance mm : +- 1.30
Del. quantity cm3/1000 strokes : 34.0	Total arice limit . 7 1.30
Tolerance	
cm3/1000 strokes : +- 2.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance	T FOLL EOAD DELIVERY AT FOLL LOAD STOP
check coterance	T
cm7/1000c · + 5 0	L Pated speed rom · 1000
cm3/1000s. : +- 5.0	Rated speed rpm : 1000
Spreed	Aneroid pressure
Spreed Tolerance	Aneroid pressure hPa : 1200
Spreed Tolerance cm3/1000 strokes : 8.0	Aneroid pressure HPa : 1200 Del. quantity
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0
Spreed Tolerance cm3/1000 strokes : 8.0	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.32	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.32 Tolerance mm : + 0.25	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.32 Tolerance mm : + 0.25 Rated speed rpm : 1103	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.32 Tolerance mm : 40.25 Rated speed rpm : 1103 guide sleeve	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.32 Tolerance mm : + 0.25 Rated speed rpm : 1103 guide sleeve travel mm : 8.70	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 117.0
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.32 Tolerance mm : 40.25 Rated speed rpm : 1103 guide sleeve travel mm : 8.70	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 117.0
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.32 Tolerance mm : 40.25 Rated speed rpm : 1103 guide sleeve travel mm : 8.70 Tolerance mm : + 0.25	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 117.0 tolerance degree : +- 4.0
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.32 Tolerance mm : + 0.25 Rated speed rpm : 3103 guide sleeve travel mm : 1.03 guide sleeve travel mm : 8.70 Tolerance mm : + 0.25 Rated speed rpm : 823	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 117.0 tolerance degree : +- 4.0
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.32 Tolerance mm : + 0.25 Rated speed rpm : 1103 guide sleeve travel mm : 8.70 Tolerance mm : + 0.25 Rated speed rpm : 823 guide sleeve guide sleeve Rated speed rpm : 823 guide sleeve	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 117.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : -1.00
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.32 Tolerance mm : + 0.25 Rated speed rpm : 1103 guide sleeve travel mm : 8.70 Tolerance mm : + 0.25 Rated speed rpm : 823 guide sleeve guide sleeve Rated speed rpm : 823 guide sleeve	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 117.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : -1.00

rack travel mm Rated speed rpm Tolerance 1/min rack travel mm Tolerance mm Rated speed rpm	: 1210 : ← 15 : −12.30 : ← 0.50	Rated speed rpm : 1000 rack travel mm : -3.90 Tolerance mm : +- 0.30 Rated speed rpm : 1000 Pressure hPa : 320 rack travel mm : -2.80 Tolerance mm : +- 0.15 Pressure hPa : 520
LOW IDLE		rack travel mm : -1.70 Tolerance mm : + 0.05
control lever position degree tolerance degree		START CUT-OUT Rated speed rpm : > 100 Rated speed rpm : < 225
Rated speed rpm rack travel mm Tolerance mm	: -7.80 : 	Check
kated speed rpm	: 200 : < -6.80	+
CRT mm max. Rated speed rpm		Aneroid pressure hPa : 1200
TORQUE CONTROL		Rated speed rpm : 600 Del. quantity
Rated speed rpm	: 1000	+ cm3/1000 strokes : 381.0 + Tolerance
Rated speed rpm rack travel mm Tolerance mm	: -0.45	cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0
Rated speed rpm rack travel mm Tolerance mm	: 800 : 0.10 : + 0.15	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 245.0
Rated speed rpm rack travel mm Tolerance mm	: 350 : -1.70 : + 0.30	Tolerance - cm3/1000 strokes : +- 1.0 - Check tolerance - cm3/1000s. : +- 4.0
ANEROID/ALTITUDE COMPENSATOR TEST		BREAKAWAY
SETTING Rated speed rpm Pressure hPa	: 1000 : 1200	Rack travel in mm : -1.00 Rated speed rpm : 1100 Tolerance 1/min : +- 5
MEASUREMENT		OTANTING SUEL DEL TUEDY
Pressure hPa	: -	+ STARTING FUEL DELIVERY +

Rated speed rpm	:		700
rack travel mm	-		20.25
Tolerance mm	:	+-	0.75
Del. quantity			
cm3/1000 strokes	:		185.0
Tolerance			
cm3/1000 strokes	:	+-	15.0
Check tolerance			
cm3/1000s.	:	+-	19.0

LOW IDLE

Rated speed rpm Del. quantity	:	300	
cm3/1000 strokes	:	34.0	
Tolerance cm3/1000 strokes	: +-	2.0	
Check tolerance cm3/1000s.	: +-	5.0	
Spreed			
Tolerance cm3/1000 strokes Check tolerance	:	8.0	
cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 25.06.96 : ISO 4113

Combination No. : 0 402 846 300

Injection pump

Pump designation : PE6P120A320RS8504 EP type number : 0 412 816 200

Governor

Governer design. : RQV275...1000PA1099K

Governer no. : 0 421 815 983

Cust. part No. : 1316641/0

Customer-spec. information Customer : DAF : WS 315 M Motor

Power KW : 315.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity

: 180 min. l/h

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 5.35 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

tolerance °NW : +- 0.50

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.75

: Barrel no. 1

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm : 13.35

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 321.5	Rated speed rpm : 334 guide sleeve travel mm : 3.08
Tolerance cm3/1000 strokes : + 1.0	Tolerance mm : +- 0.25
Check tolerance cm3/1000s. : + 6.0	Rated speed rpm : 400 guide sleeve travel mm : 3.92 Tolerance mm : +- 0.25
Spreed Tolerance cm3/1000 strokes : 8.0	Rated speed rpm : 1310 guide sleeve travel mm : 13.50
Check tolerance cm3/1000s. : 14.0	Tolerance mm : +- 0.50
Rated speed rpm : 275	GUIDE SLEEVE POSITION
Rack travel in mm : 5.80	Rated speed rpm : 1130
Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 13.0 Tolerance	Rack travel in mm: 12.70 Tolerance mm: +- 1.30
cm3/1000 strokes : +- 3.0 Check tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000s. : +- 6.0 Spreed	Rated speed rpm : 980 Aneroid pressure hPa : -
Tolerance cm3/1000 strokes : 8.0 Check tolerance	+ Del. quantity + cm3/1000 strokes : 321.5
cm3/1000s. : 14.0	+ Tolerance + cm3/1000 strokes : +- 1.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ Check tolerance + cm3/1000s. : +- 6.0 + Spreed
GUIDE SLEEVE TRAVEL	Tolerance cm3/1000 strokes : 8.0 Check tolerance
Rated speed rpm : 275	cm3/1000s. : 14.0
guide sleeve travel mm : 2.14	
Tolerance mm : + 0.25	CONTROL LEVER
Rated speed rpm : 1050 guide sleeve travel mm : 9.89	<pre>+ control lever + position degree : 120.0 + tolerance degree : + 4.0</pre>
Tolerance mm : +- 0.25	RATED SPEED
Rated speed rpm : 692 guide sleeve	t rack travel mm : 12.35
travel mm : 6.45	+ Rated speed rpm : 1037
Tolerance mm : +- 0.25	Tolerance 1/min : +- 5
Rated speed rpm : 284	rack travel mm : 4.00
<pre>guide sleeve travel mm : 2.27 Tolerance mm : +- 0.25</pre>	Rated speed rpm : 1150 Tolerance 1/min : +- 15
TOTER AFFECTION	rack travel mm : 0.70

Tolerance mm	: +- 0.70
Rated speed rpm	: 1275
LOW IDLE	
control lever position degree tolerance degree	: 76.0 : +- 4.0
Testing:	
Rated speed rpm	: 275
rack travel mm	: 5.80
Tolerance mm	: +- 0.10
rack travel mm	: 2.00
Rated speed rpm	: 405
Tolerance 1/min	: +- 30
Rated speed rpm	: 175
CRT mm min.	; > 8.00
TORQUE CONTROL	
Rated speed rpm	: 980
rack travel mm	: 13.35
Tolerance mm	: + 0.05
Rated speed rpm	: 750
rack travel mm	: 12.75
Tolerance mm	: + 0.05
Rated speed rpm	: 600
rack travel mm	: 12.05
Tolerance mm	: + 0.10
Rated speed rpm	: 500
rack travel mm	: 12.00
Tolerance mm	: + 0.10
Rated speed rpm	: 400
rack travel mm	: 11.95
Tolerance mm	: +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 980
Pressure hPa	: 1500
rack travel mm	: 13.35
Tolerance mm	: + 0.05

MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 980 : 8.90 : + 0.10
Rated speed rpm	: 980
Pressure hPa rack travel mm Tolerance mm	: 750 : 12.25 : +- 0.05
Pressure hPa rack travel mm Tolerance mm	: 420 : 10.00 : +- 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	RACTERISTICS
Aneroid pressure hPa	: -
Aneroid pressure hPa Rated speed rpm	RACTERISTICS : - : 750
Aneroid pressure hPa	: - : 750
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: - : 750 : 316.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: - : 750 : 316.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: - : 750 : 316.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: - : 750 : 316.0 : + 2.0 : + 8.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed Tolerance	: - : 750 : 316.0 : + 2.0 : + 8.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 750 : 316.0 : +- 2.0 : +- 8.0 : 8.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: 750 : 750 : 316.0 : +- 2.0 : +- 8.0 : 8.0 : 14.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 750 : 316.0 : +- 2.0 : +- 8.0 : 8.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Apreed Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: 750 : 316.0 : + 2.0 : + 8.0 : 8.0 : 14.0 : 600
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 750 : 750 : 316.0 : +- 2.0 : +- 8.0 : 8.0 : 14.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Apreed Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: 750 : 316.0 : + 2.0 : + 8.0 : 8.0 : 14.0 : 600
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 750 : 316.0 : + 2.0 : + 8.0 : 8.0 : 14.0 : 600 : 188.0

BREAKAWAY

Rack travel in mm : 12.35
Rated speed rpm : 1037
Tolerance 1/min : + 5

LOW IDLE

Rated speed rpm : 275 Del. quantity cm3/1000 strokes : 13.0 Tolerance 3.0 cm3/1000 strokes : +-Check tolerance cm3/1000s. 6.0 Spreed Tolerance 8.0 cm3/1000 strokes : Check tolerance 14.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 26.04.96 Test oil : ISO 4113

Combination No. : 0 402 846 302

Injection pump

Pump designation : PE6P12OA32ORS8520 EP type number : 0 412 826 202

Governor

Governer design. : RQV275...1000PA1269K

Governer no. : 0 421 815 969

Cust. part No. : 1310222/2

Customer-spec. information
Customer : DAF
Motor : XF 355 M

Motor : XF 355 M Power KW : 355.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 2.5
Tolerance bar : +- 0.1

Overflow quantity

min. l/h : 110 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.85 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.30

Check

tolerance °NW : +- 0.50

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm : 14.15 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 344.0	+ Rated speed rpm : 1310 + guide sleeve + travel mm : 13.50
Tolerance cm3/1000 strokes : +- 1.0	Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : ← 5.0	GUIDE SLEEVE POSITION
Spreed	Rated speed rpm : 1150
Tolerance cm3/1000 strokes : 6.0	Rack travel in mm : 13.10 Tolerance mm : +- 2.70
Check tolerance cm3/1000s. : 12.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 275	Rated speed rpm : 980 Aneroid pressure hPa : 1500
Rack travel in mm : 4.90	+ Del. quantity
Tolerance mm : + 0.10	+ cm3/1000 strokes : 344.0 + Tolerance
Del. quantity cm3/1000 strokes : 18.0	+ cm3/1000 strokes : +- 1.0
Tolerance cm3/1000 strokes : +- 3.0	+ Check tolerance + cm3/1000s. : +- 5.0
Check tolerance	Spreed
cm3/1000S. : +- 6.0 Spreed	+ Tolerance + cm3/1000 strokes : 6.0
Tolerance	+ Check tolerance + cm3/1000s. : 12.0
Check tolerance	+ 12.0
cm3/1000s. : 13.0	<u> </u>
4-1	CONTROL LEVER
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	t control lever
	position degree : 118.0
GUIDE SLEEVE TRAVEL	tolerance degree : +- 4.0
	RATED SPEED
Rated speed rpm : 275 guide sleeve	rack travel mm : 13.15
travel mm : 2.04	Rated speed rpm : 1050
Tolerance mm : +- 0.20	Tolerance 1/min : +- 5
Rated speed rpm : 1062	rack travel mm : 4.00
guide sleeve	Rated speed rpm : 1160
travel mm : 10.05 Tolerance mm : +- 0.15	Tolerance 1/min : +- 15
	rack travel mm : 0.70
Rated speed rpm : 697 guide sleeve	Tolerance mm : + 0.70 Rated speed rpm : 1275
travel mm : 6.49	
Tolerance mm : +- 0.25	İ
Rated speed rpm : 400 guide sleeve	LOW IDLE
travel mm : 3.92	†
Tolerance mm : +- 0.25	+ control lever + position degree : 73.0

tolerance degree	: +- 4.0	† Rated speed rpm : 980
Testing:		Pressure hPa : 750
_		rack travel mm : 12.90
Rated speed rpm	: 275	Tolerance mm : +- 0.05
rack travel mm	4.90	1
rack travel mm Tolerance mm	· + 0.10	Pressure hPa : 380
roceratice likil	0.10	rack travel mm : 10.30
5	. 475	
Rated speed rpm	: 175	+ Tolerance mm : +- 0.10
		†
CRT mm min.	: > 8.20	†
	700	†
Rated speed rpm	: 300	
		+ FUEL DELIVERY CHARACTERISTICS
		†
TORQUE CONTROL		+ Aneroid pressure
		+ hPa : 1500
Rated speed rpm	: 980	+ Rated speed rpm : 750
rack travel mm	: 14.15	+ Del. quantity
Tolerance mm	: +- 0.05	+ cm3/1000 strokes : 353.0
		+ Tolerance
Rated speed rpm	: 800	- cm3/1000 strokes : +- 2.0
	: 13.95	+ Check tolerance
rack travel mm		- cm3/1000s. : +- 6.0
Tolerance mm	: 0.10	T Cm201
5) 1 20 1 20 20	350	+ Spreed
Rated speed rpm	: 750	+ Tolerance
rack travel mm	: 13.70	+ cm3/1000 strokes : 10.0
Tolerance mm	: +- 0.05	+ Check tolerance
		Rated speed rpm : 750 Del. quantity cm3/1000 strokes : 353.0 Tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 10.0 Check tolerance cm3/1000s. : 15.0 Aneroid pressure hPa : - Rated speed rpm : 600 Del. quantity cm3/1000 strokes : 200.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000 strokes : +- 5.0 Spreed
Rated speed rpm	: 700 : 13.20	+
rack travel mm	: 13.20	+ Aneroid pressure
rack travel mm Tolerance mm	: +- 0.10	+ hPa : −
		+ Rated speed rpm : 600
Rated speed rpm	: 600	→ Del. quantity
rack travel mm		+ cm3/1000 strokes : 200.0
Tolerance mm		+ Tolerance
. 3 (3 . 4 . 1 . 1 . 1 . 1 . 1 . 1 . 1 . 1 . 1		+ cm3/1000 strokes : +- 1.0
Rated speed rpm	: 500	+ Check tolerance
rack travel mm	12.50	+ cm3/1000s. : +- 5.0
rack travel mm Tolerance mm	: +- 0.10	Spreed
Toterance min	0.10	Tolerance
		cm3/1000 strokes : 10.0
ANEROID (ALTITUDE		Check tolerance
ANEROID/ALTITUDE		- cm3/1000s. : 15.0
COMPENSATOR TEST		T (m3/10003 13.0
		T
		BREAKALIAV
SETTING		+ BREAKAWAY
	000	
Rated speed rpm	: 980	17.45
Pressure hPa	: 1500	Rack travel in mm: 13.15
rack travel mm	: 14.15	+ Rated speed rpm : 1050
Tolerance mm	: +- 0.05	Tolerance 1/min : +- 5
		+
MEASUREMENT		+
		+
Pressure hPa	: -	+
Rated speed rpm	: 980	+
rack travel mm	9.15	
Tolerance mm	: +- 0.10	↓ LOW IDLE
. 0 (C) (A) (C) (IRII		
		1

Rated speed rpm Del. quantity	: 275	
cm3/1000 strokes	: 18.0	
Tolerance cm3/1000 strokes	: +- 3.0	
Check tolerance cm3/1000s.	: +- 6.0	
Spreed	. ' 0.0	
Tolerance cm3/1000 strokes Check tolerance	: 8.0	
cm3/1000s.	: 13.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 22.03.96 : ISO 4113

Combination No. : 0 402 946 017

Injection pump

Pump designation : PES6P120A720RS8039

EP type number : 0 412 926 026

Governor

Governer design. : RQV250...950PA1243

Governer no.

: 0 421 814 162

Cust. part No. : 1374808

Customer-spec. information : SCANIA Customer : DSC 11.79 Motor

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar

Overflow quantity

min. l/h : 115 Tolerance l/h : +- 10.0

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

26.0 Test pressure bar : Tolerance bar : +- 1.0

: 4.15 Prestroke mm : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 20.50 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.30

Check

tolerance *NW : +- 0.50

Start of delivery blocking

Tolerance : +- 0.50

Check

: +- 0.75 tolerance °NW

: 1 Barrel no.

BASIC SETTING

700 Rated speed rpm :

Rack travel in mm: 11.90

Tolerance mm : +- 0.05	+ Tolerance mm : + 0.25
Del. quantity cm3/1000 strokes : 298.0	Rated speed rpm : 1260 guide sleeve
Tolerance cm3/1000 strokes : + 1.0	travel mm : 11.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : +- 9.0	GUIDE SLEEVE POSITION
Spreed Tolerance cm3/1000 strokes : 8.0	Rated speed rpm : 1165 Rack travel in mm : 10.90 Tolerance mm : +- 1.30
Check tolerance cm3/1000s. : 14.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 250	Rated speed rpm : 700 Aneroid pressure hPa : 1500
Rack travel in mm: 5.60 Tolerance mm: +- 0.10 Del. quantity	Del. quantity cm3/1000 strokes : 298.0 Tolerance
cm3/1000 strokes : 21.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance	+ cm3/1000 strokes : +- 1.0 + Check tolerance + cm3/1000s. : +- 9.0 + Spreed
cm3/1000s. : +- 6.0 Spreed Tolerance	Tolerance cm3/1000 strokes : 8.0 Check tolerance
cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0	cm3/1000s. : 14.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 55.0
GUIDE SLEEVE TRAVEL	tolerance degree : +- 4.0 control lever
Rated speed rpm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20	position degree : 119.0 tolerance degree : +- 4.0 RATED SPEED
Rated speed rpm : 1008 guide sleeve travel mm : 8.61 Tolerance mm : +- 0.15	rack travel mm : 10.90 Rated speed rpm : 995 Tolerance 1/min : +- 5
Rated speed rpm : 732 guide sleeve travel mm : 6.35	rack travel mm : 4.00 Rated speed rpm : 1115 Tolerance 1/min : +- 15
Tolerance mm : + 0.25 Rated speed rpm : 470	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1200
guide sleeve travel mm : 4.09	

		- + Pressure hPa : 600
LOW IDLE		rack travel mm : 11.40
2000		+ Tolerance mm : +- 0.05
		+
control lever	. 94.0	CTART CUT OUT
position degree tolerance degree		+ START CUT-OUT
toterance degree	. +- 4.0	T Rated speed rpm : > 100
control lever		+ Rated speed rpm : < 170
position degree		}
tolerance degree	: +- 4.0	+ Check
		+ speed 1/min : > 80
Testing:		+ Check + speed 1/min : < 190
Rated speed rpm	. 250	T Speed 1/11/1/1 : \ 190
rack travel mm	5.60	
Tolerance mm		FUEL DELIVERY CHARACTERISTICS
		+
Rated speed rpm	: 150	Aneroid pressure
	> 0.40	+ hPa : 1500
CRT mm min.	: > 8.10	Rated speed rpm : 950 Del. quantity
Rated speed rpm	: 300	+ cm3/1000 strokes : 282.0
Naced Speed (pill	. 500	+ Tolerance
		- + cm3/1000 strokes : +- 4.0
TORQUE CONTROL		+ Check tolerance
		+ cm3/1000s. : +- 9.0
Rated speed rpm		†
rack travel mm		+ Aneroid pressure + hPa : -
Tolerance mm	: +- 0.03	+ Rated speed rpm : 500
Rated speed rpm	: 950	Del. quantity
rack travel mm	: 11.90	+ cm3/1000 strokes : 197.0
Tolerance mm	: +- 0.05	+ Tolerance
		+ cm3/1000 strokes : +- 1.0
ANEDATA /AL TITUDE		-
ANEROID/ALTITUDE COMPENSATOR TEST		$\frac{1}{1}$ cm3/1000s. : +- 4.0
COMPENSATOR TEST		
		# BREAKAWAY
SETTING		+
	500	† Bull 4m 1 : 40.00
Rated speed rpm	: 500	+ Rack travel in mm : 10.90 + Rated speed rpm : 995
Pressure hPa rack travel mm	: 1500 : 11.90	+ Rated speed rpm : 995 + Tolerance 1/min : +- 5
Tolerance mm	: +- 0.05	T rocer disce 17 mily .
10ter arrow min		+
MEASUREMENT		+
		STARTING FUEL DELIVERY
Pressure hPa	500	+ Rated speed rpm : 100
Rated speed rpm rack travel mm	: 9.20	+ rack travel mm : 20.50
Tolerance mm	: +- 0.20	Tolerance mm : +- 0.50
1.5 COLOTTO TRIL	,	+ Del. quantity
Rated speed rpm	: 500	+ cm3/1000 strokes : 225.0
	762	† Tolerance
Pressure hPa	: 350	cm3/1000 strokes : +- 20.0
rack travel mm	: 10.30 : +- 0.15	+ Check tolerance + cm3/1000s. : +- 24.0
Tolerance mm	, - U.IJ	L cura 10000

LOW IDLE

250 Rated speed rpm Del. quantity cm3/1000 strokes :

21.0 Tolerance

3.0 cm3/1000 strokes : +-Check tolerance

cm3/1000s. 6.0

Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance

8.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 08.02.96 Edition Test oil : ISO 4113

Combination No. : 0 402 946 019

Injection pump

Pump designation : PES6P120A720RS8041

EP type number : 0 412 926 027

Governor

Governer design. : RQV250...950PA1253

: -1

: 0 421 814 167 Governer no.

Cust. part No. : 1383216

Customer-spec. information : SCANIA Customer

Motor : DSC 11.74

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C 40 2.0 Tolerance °C

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

: 110 min. l/h : +- 10.0 Tolerance l/h

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 bar : +- 1.5 Tolerance bar

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-1.0

4,40 Prestroke mm Tolerance mm : + - 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm : 20.50 : +- 0.50 Tolerance mm

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

: +- 0.30 Tolerance

Check

tolerance °NW : +- 0.50

Start of delivery blocking

Tolerance : +- 0.50

Check

: +- 0.75 tolerance °NW

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 10.35 Tolerance mm : +- 0.05

	+
Del. quantity	Rated speed rpm : 1390
cm3/1000 strokes : 227.0	+ guide sleeve
	+ travel mm : 11.50
Tolerance	+ Tolerance mm : + 0.50
cm3/1000 strokes : +- 1.0	Total allocations
CIIDA TOOD SEFORCS	
Check tolerance	+ GUIDE SLEEVE POSITION
cm3/1000s. : +- 7.0	4
	Rated speed rpm : 1250
Spreed	
Tolerance	Rack travel in mm: 9.35
cm3/1000 strokes : 8.0	+ Tolerance mm : +- 1.30
	+
Check tolerance	
cm3/1000s. : 14.0	+ FULL LOAD DELIVERY AT FULL LOAD STOP
	+
Rated speed rpm : 250	+ Rated speed rpm : 700
	+ Aneroid pressure
	+ hPa : 1500
Rack travel in mm : 5.60	+ Del. quantity
Tolerance mm : +- 0.10	+ cm3/1000 strokes : 227.0
Del. quantity	† Tolerance
cm3/1000 strokes : 16.0	+ cm3/1000 strokes : +- 1.0
Tolerance	+ Check tolerance
cm3/1000 strokes : +- 3.0	+ cm3/1000s. : +- 7.0
Check tolerance	+ Spreed
cm3/1000s. : +- 6.0	+ Tolerance
Spreed	+ cm3/1000 strokes : 8.0
Tolerance	+ Check tolerance
cm3/1000 strokes : 4.0	+ cm3/1000s. : 14.0
Check tolerance	†
cm3/1000s. : 8.0	†
	CONTROL LEUED
(A) OFTENIO OF THEFTON DUMP	+ CONTROL LEVER
(B) SETTING OF INJECTION PUMP	T
WITH GOVERNOR	+ control lever
	+ position degree : 58.0 + tolerance degree : +- 4.0
CHINE OF EENE TOWNER	tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	control lever
Rated speed rpm : 250	+ position degree : 111.0
	tolerance degree : +- 4.0
guide sleeve travel mm : 1.31	T toterance degree 4.0
Tolerance mm : + 0.20	T RATED SPEED
Toterance min 0.20	I MATEU STEED
Rated speed rpm : 1005	rack travel mm : 9.35
guide sleeve	Rated speed rpm : 995
travel mm : 7.25	Tolerance 1/min : +- 5
Tolerance mm : +- 0.15	To Cot allow Trimity
Total allection	rack travel mm : 4.00
Rated speed rpm : 673	+ Rated speed rpm : 1115
guide steeve	+ Tolerance 1/min : +- 15
travel mm : 4.96	1
Tolerance mm : + 0.25	rack travel mm : 0.50
	Tolerance mm : + 0.50
Rated speed rpm : 420	Rated speed rpm : 1250
guide sleeve	+
travel mm : 3.37	+
Tolerance mm : +- 0.25	+
	·

		+
LOW IDLE		+ Pressure hPa : 430 + rack travel mm : 9.80 + Tolerance mm : +- 0.05
control lever position degree tolerance degree		START CUT-OUT
control lever position degree tolerance degree		Rated speed rpm : > 100 Rated speed rpm : < 170 Check
Testing:	. +- 4.0	speed 1/min : > 80 + Check
Rated speed rpm rack travel mm Tolerance mm	: 5.60	speed 1/min : < 190 FUEL DELIVERY CHARACTERISTICS
Rated speed rpm		Aneroid pressure
CRT mm min.	: > 7.00	+ hPa : 1500 + Rated speed rpm : 950 + Del. quantity
Rated speed rpm	: 300	- cm3/1000 strokes : 216.0 - Tolerance
FORQUE CONTROL		+ cm3/1000 strokes : +- 4.0 + Check tolerance - cm3/1000s. : +- 6.0
Rated speed rpm rack travel mm Folerance mm Rated speed rpm rack travel mm	: 10.35 : + 0.05 : 950 : 10.35	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 153.0
erance mm ROID/ALTITUDE MPENSATOR TEST	: +- 0.05	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000S. : +- 4.0
		BREAKAWAY
ETTING ated speed rpm ressure hPa ack travel mm olerance mm	: 500 : 1500 : 10.35 : +- 0.05	Rack travel in mm: 9.35 Rated speed rpm: 995 Tolerance 1/min: +- 5
MEASUREMENT		STARTING FUEL DELIVERY
ressure hPa lated speed rpm lack travel mm lolerance mm	: - : 500 : 8.20 : +- 0.20	Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 0.50
Rated speed rpm	: 500	+ Del. quantity + cm3/1000 strokes : 170.0 + Tolerance
Pressure hPa rack travel mm Tolerance mm	: 260 : 8.80 : +- 0.15	cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : +- 24.0

LOW IDLE

250 Rated speed rpm : Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 15.07.96 Test oil : ISO 4113

Combination No. : 0 403 246 044A

Injection pump

Pump designation : PES6MW100/720RS1522

EP type number : 0 413 206 023

Governor

Governer design. : RQV300...1300MW148

: -1

: 0 420 083 322 Governer no.

Cust. part No. : 0250744602

Customer-spec. information Customer : MB-NFZ Motor : 0M366LA Power KW : 177.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0 x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm Tolerance mm : 4.55 : +- 0.05 Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.00 Tolerance mm : +- 1.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

: +~ 0.75 tolerance °NW

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 14.45

: +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 133.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance : +- 4.0

cm3/1000s. Spreed

Tolerance

cm3/1000 strokes : 5.0

	t		
Check tolerance	+		
cm3/1000s. :	8.0	FULL LOAD DELIVERY AT FULL LOAD STOP	
Rated speed rpm :	300	Rated speed rpm : 1300	
	+	Aneroid pressure	
~	, 50	hPa : 1200	
Rack travel in mm :		Del. quantity cm3/1000 strokes : 133.0	
Tolerance mm : Del. quantity	+ 0.10	Tolerance	
cm3/1000 strokes :	12.0	cm3/1000 strokes : +- 1.0	
Tolerance	1	Check tolerance	
cm3/1000 strokes :	+ 2.0 +	cm3/1000s. : +- 4.0	
Check tolerance	+	Spreed	
	+ 4.5 +	Tolerance 5.0	
Spreed	†	cm3/1000 strokes : 5.0	
Tolerance cm3/1000 strokes :	2.0	Check tolerance cm3/1000s. : 8.0	
Check tolerance	I I	CIII37 10003 8.0	
cm3/1000s. :	4.0		
	1		
	+	CONTROL LEVER	
(B) SETTING OF INJE	CTION PUMP +		
WITH GOVERNOR	†	control lever	
		position degree : 116.0 tolerance degree : +- 4.0	
GUIDE SLEEVE TRAVEL	i	tolerance degree : +- 4.0	
GOIDE SELEVE TRAVEE	1	RATED SPEED	
Rated speed rpm :	300		
guide sleeve	+	rack travel mm : 13.45	
travel mm :	0.91	Rated speed rpm : 1345	
Tolerance mm :	+ 0.20 +	Tolerance 1/min : +- 5	
Rated speed rpm :	1354	rack travel mm : 4.00	
guide sleeve	1354	Rated speed rpm : 1520	
travel mm :	8.08	Tolerance 1/min : + 15	
	← 0.15		
	+	rack travel mm : 0.50	
Rated speed rpm :	1017 +	Tolerance mm : +- 0.50	
guide sleeve	f (3	Rated speed rpm : 1600	
travel mm :	5.62 + 0.25		
Tolerance mm :	T 0.23		
Rated speed rpm :	690	LOW IDLE	
guide sleeve	+		
travel mm :	3.34		
Tolerance mm :	← 0.25 +	control lever	
	1070	position degree : 75.0	
Rated speed rpm :	1830	tolerance degree : +- 4.0	
guide sleeve travel mm :	13.50	Testing:	
	+ 0.50	resemig.	
. Occidence mail	+	Rated speed rpm : 300	
		rack travel mm ; 4.50	
GUIDE SLEEVE POSITIO	on +	Tolerance mm : +- 0.10	
	4570	Datad anand mas : 200	
Rated speed rpm :	1570	Rated speed rpm : 200	
Rack travel in mm :	10 00 I	CRT mm min. : > 4.80	
Tolerance mm :		(1) in milition () 4.00	
(Ote) differ this			

		+ Tolerance
TOPOUT CONTROL		+ cm3/1000 strokes : + 2.0
TORQUE CONTROL		+ Check tolerance + cm3/1000s. : +- 5.0
Rated speed rpm		+ Spreed
rack travel mm		+ Tolerance
Tolerance mm	: 0.05	+ cm3/1000 strokes : 6.0 + Check tolerance
Rated speed rpm	: 750	- cm3/1000s. : 9.0
rack travel mm	: 14.45	+
Tolerance mm	: +- 0.10	+ Aneroid pressure
		+ hPa : - + Rated speed rpm : 500
ANEROID/ALTITUDE		+ Del. quantity
COMPENSATOR TEST		+ cm3/1000 strokes : 46.0
		+ Tolerance
APT 7110		+ cm3/1000 strokes : +- 1.0
SETTING		+ Check tolerance + cm3/1000s. : +- 3.0
Rated speed rpm	: 500	T (11137 10003
Pressure hPa	: 1200	+
rack travel mm		+ BREAKAWAY
Tolerance mm	: +- 0.10	†
MEASUREMENT		+ Rack travel in mm : 13.45
TIENOONEI IEN		+ Rated speed rpm : 1345
Pressure hPa	: -	Tolerance 1/min : +- 5
Rated speed rpm		†
Tolerance mm	: - 0.05	I
Rated speed rpm	: 500	STARTING FUEL DELIVERY
Pressure hPa	: 750	Rated speed rpm : 100
rack travel mm	: 4.80	+ Del. quantity
Tolerance mm	: +- 0.10	+ cm3/1000 strokes : 160.0
Pressure hPa	: 300	+ Tolerance + cm3/1000 strokes : +- 5.0
ressure nra rack travel mm	: 1.50	+ Check tolerance
Tolerance mm	: +- 0.10	+ cm3/1000s. : +- 8.0
		†
START CUT-OUT		‡
Rated speed rpm	: > 100	LOW IDLE
Rated speed rpm	: < 200	+
• •		Rated speed rpm : 300
Check		+ Del. quantity
speed 1/min Check	: > 80	+ cm3/1000 strokes : 12.0 + Tolerance
speed 1/min	: < 220	- cm3/1000 strokes : +- 2.0
opeca man		+ Check tolerance
		- cm3/1000s. : +- 4.5
FUEL DELIVERY CHA	ARACTERISTICS	+ Spreed
Aneroid pressure		+ Tolerance + cm3/1000 strokes : 2.0
hPa	: 1200	Check tolerance
Rated speed rpm	: 750	- cm3/1000s. : 4.0
Del. quantity		+
cm3/1000 strokes	: 128.0	†

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 04.07.96 : ISO 4113

Combination No.

: 0 403 246 057

Injection pump

Pump designation : PES6MW100/720RS1527

EP type number

: 0 413 206 026

Governor

Governer design. : RQV300...1300MW155

: -1

Governer no.

: 0 420 083 345

Cust. part No. : 0270748002

Customer-spec. information : MB-NFZ Customer : 0M366LA Motor

Power KW

: 155.0

TEST BENCH REQUIREMENTS

Inlet line

: 3.1

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 089

Outside diameter :

8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-

Prestroke mm : 4.55 Tolerance mm : +- 0.05

Check

: + - 0.10tolerance mm

Rack travel in mm : 20.00 : +- 1.00 Tolerance mm

: 1-5-3-6-2-Firing order

: 4

: 0-60-120-180-240 Phasing

: -300

: +- 0.50 Tolerance

Check

: +- 0.75 tolerance "NW

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 13.30

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 118.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +-3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

+	
Check tolerance + cm3/1000s. : 6.0 +	FULL LOAD DELIVERY AT FULL LOAD STOP
(1115) 10005.	TOLE LOAD DELIVERY AT TOLE LOAD STOP
Rated speed rpm : 300	Rated speed rpm : 1300
†	Aneroid pressure hPa : 1000
Rack travel in mm: 3.80	Del. quantity
Tolerance mm : + 0.10	cm3/1000 strokes : 118.0
Del. quantity	Tolerance
cm3/1000 strokes : 12.0	cm3/1000 strokes : +- 1.0
Tolerance + 2.0 +	Check tolerance cm3/1000s. : +- 3.0
Check tolerance	Spreed
cm3/1000s. : +- 4.5	Tolerance
Spreed	cm3/1000 strokes : 3.5
Tolerance +	Check tolerance cm3/1000s. : 6.0
cm3/1000 strokes : 3.5 + Check tolerance	cm5/10005. : 6.0
cm3/1000s. : 5.5	
+	
+	CONTROL LEVER
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever
WITH GOVERNOON	position degree : 110.0
	tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	DATES ODEES
Rated speed rpm : 300	RATED SPEED
guide sleeve	rack travel mm : 12.30
travel mm : 0.91 +	Rated speed rpm : 1345
Tolerance mm : +- 0.20 +	Tolerance 1/min : +- 5
Rated speed rpm : 1355	rack travel mm : 4.00
guide sleeve	Rated speed rpm : 1465
travel mm : 8.62 +	Tolerance 1/min : +- 15
Tolerance mm : +- 0.15 +	0.50
Rated speed rpm : 1067	rack travel mm : 0.50 Tolerance mm : +- 0.50
guide sleeve	Rated speed rpm : 1550
travel mm : 6.13 +	
Tolerance mm : +- 0.25	
Rated speed rpm : 730 +	LOW IDLE
guide steeve	
travel mm : 3.51 +	
Tolerance mm: : +- 0.25	control lever position degree : 75.0
Rated speed rpm : 1750	position degree : 75.0 tolerance degree : +- 4.0
guide sleeve	to ter arrow dogs to the state of the state
travel mm : 13.50 +	Testing:
Tolerance mm : +- 0.50	Dated aread man . 700
İ	Rated speed rpm : 300 rack travel mm : 3.80
GUIDE SLEEVE POSITION	Tolerance mm : + 0.10
+	
Rated speed rpm : 1520	rack travel mm : 2.00
Rack travel in mm: 10.00	Rated speed rpm : 400 Tolerance 1/min : +- 30
Tolerance mm : + 2.70 +	TOTAL PRINTER TO SU
TO COT OF THE PARTY OF THE PART	

Rated speed rpm	: 200	+ Del. quantity + cm3/1000 strokes : 117.0
CRT mm min.	: > 4.54	† Tolerance
		+ cm3/1000 strokes : +- 1.5
TORQUE CONTROL		
		Spreed
Rated speed rpm		+ Tolerance
rack travel mm Tolerance mm		+ cm3/1000 strokes : 6.0 + Check tolerance
		- cm3/1000s. : 9.0
Rated speed rpm	: 600	+
rack travel mm Tolerance mm	: 13.30 · += 0.10	+ Aneroid pressure + hPa : 1000
TOTEL BLICE IIM	0.10	Rated speed rpm : 1300
ANEROID/ALTITUDE		+ cm3/1000 strokes : 104.0 + Tolerance
COMPENSATOR TEST		+ cm3/1000 strokes : +- 1.5
		+ Check tolerance
SETTING		+ cm3/1000s. : + 3.0
Rated speed rpm	: 500	Aneroid pressure
Pressure hPa	: 1000	+ hPa : -
rack travel mm	: 13.30	Rated speed rpm : 500
Tolerance mm	: +- 0.05	+ Del. quantity + cm3/1000 strokes : 48.0
MEASUREMENT		+ Tolerance
		+ cm3/1000 strokes : +- 1.0
Pressure hPa	500	+ Check tolerance + cm3/1000s. : +- 3.0
Rated speed rpm Tolerance mm		1 0003
Rated speed rpm	: 500	+ BREAKAWAY
Pressure hPa		†
rack travel mm	: 3.25 : + 0.10	+ Rack travel in mm : 12.30 + Rated speed rpm : 1345
Tolerance mm	. +- 0.10	+ Tolerance 1/min : +- 5
Pressure hPa	: 300	+
rack travel mm	: 1.00 : +- 0.10	†
Tolerance mm	. +- 0.10	STARTING FUEL DELIVERY
START CUT-OUT		Rated speed rpm : 100
START COTTOOL		+ Del. quantity
Rated speed rpm	: > 100	cm3/1000 strokes : 150.0
Rated speed rpm	: < 200	+ Tolerance + cm3/1000 strokes : +- 5.0
Check		+ Check tolerance
speed 1/min	: > 80	+ cm3/1000s. : +- 8.0
Check		†
speed 1/min	: < 220	Ţ
FUEL DEL TUEDU CUA	ADACTEDICTICS	
FUEL DELIVERY CHA	IKACTEKISTIUS	+ LOW IDLE
Aneroid pressure		Rated speed rpm : 300
hPa	: 1000	<pre>pel. quantity cm3/1000 strokes : 12.0</pre>
Rated speed rpm	: 600	+ cm3/1000 strokes : 12.0

Tolerance cm3/1000 strokes	: +-	2.0
Check tolerance cm3/1000s.	: +-	4.5
Spreed Tolerance		
cm3/1000 strokes Check tolerance	:	3.5
cm3/1000s.	:	5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 04.07.96 Test oil : ISO 4113

Combination No. : 0 403 246 058

Injection pump

Pump designation : PES6MW100/720RS1527

EP type number : 0 413 206 026

Governor

Governer design. : RQV300...1300MW155

: -2

Governer no. : 0 420 083 346

Cust. part No. : 0270748102

Customer-spec. information
Customer : MB-NFZ
Motor : 0M366LA
Power KW : 155.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +- 1.0

Prestroke mm : 4.55
Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.00 Tolerance mm : + 1.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: +- 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 13.30Tolerance mm : $\leftarrow 0.05$

Del. quantity

cm3/1000 strokes : 118.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

	†
Check tolerance cm3/1000s. : 6.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 300	Rated speed rpm : 1300 Aneroid pressure hPa : 1000
Rack travel in mm : 3.80	Del. quantity
Tolerance mm : + 0.10	- cm3/1000 strokes : 118.0
Del. quantity	Tolerance
cm3/1000 strokes : 12.0	+ cm3/1000 strokes : + 1.0
Tolerance	+ Check tolerance
cm3/1000 strokes : +- 2.0	+ cm3/1000s. : +- 3.0
Check tolerance	Spreed
cm3/1000s. : + 4.5	+ Tolerance
Spreed	+ cm3/1000 strokes : 3.5
Tolerance	+ Check tolerance
cm3/1000 strokes : 3.5	$\frac{1}{2}$ cm3/1000s. : 6.0
Check tolerance	
cm3/1000s. : 5.5	}
	
(B) SETTING OF INJECTION PUMP	CONTROL LEVER
WITH GOVERNOR	+ control lever
	position degree : 110.0
	+ tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	+
	+ RATED SPEED
Rated speed rpm : 300	+
guide sleeve	+ rack travel mm : 12.30
travel mm : 0.91	+ Rated speed rpm : 1345
Tolerance mm : + 0.20	+ Tolerance 1/min : +- 5
	+
Rated speed rpm : 1355	† rack travel mm : 4.00
guide sleeve	+ Rated speed rpm : 1465
travel mm : 8.62	† Tolerance 1/min : + 15
Tolerance mm : +- 0.15	†
	+ rack travel mm : 0.50
Rated speed rpm : 1067	Tolerance mm : +- 0.50
guide sleeve	+ Rated speed rpm : 1550
travel mm : 6.13	†
Tolerance mm : +- 0.25	†
770	101.7015
Rated speed rpm : 730	+ LOW IDLE
guide sleeve travel mm : 3.51	†
	T control loven
Tolerance mm : +- 0.25	+ control lever + position degree : 75.0
Rated speed rpm : 1750	tolerance degree : +- 4.0
The second secon	T toterance degree . 4.0
guide sleeve travel mm : 13.50	Testing:
	T resumg.
Tolerance mm : + 0.50	Rated speed rpm : 300
	- rack travel mm : 3.80
GUIDE SLEEVE POSITION	Tolerance mm : +- 0.10
COTAL OFFERE LOOTITOIA	1000.00100.000
Rated speed rpm : 1520	∔ rack travel mm : 2.00
Tates speed (pill) (SES	Rated speed rpm : 400
Rack travel in mm : 10.00	+ Tolerance 1/min : +- 30
Tolerance mm : + 2.70	1
TO SOT OF THE PARTY OF THE PART	ı

Rated speed rpm	: 200	+ Del. quantity
CRT mm min.	. > / 5/	+ cm3/1000 strokes : 117.0 + Tolerance
נאו האח חזרו.	: > 4.54	+ cm3/1000 strokes : +- 1.5
T00015 00117001		
TORQUE CONTROL		
 	1700	+ Spreed
Rated speed rpm		+ Tolerance + cm3/1000 strokes : 6.0
rack travel mm		
Tolerance mm	: +- 0.05	+ Check tolerance + cm3/1000S. : 9.0
		+ cm3/1000s. : 9.0
Rated speed rpm rack travel mm Tolerance mm	17.70	1 0,00000
rack travel mm	13.30	+ Aneroid pressure
ioterance mm	: +- 0.10	hPa : -
		Rated speed rpm : 500
ANIEDOTO /AL TETICE		Del. quantity
ANEROID/ALTITUDE		+ cm3/1000 strokes : 48.0
COMPENSATOR TEST		Tolerance
		cm3/1000 strokes : +- 1.0
0.00TTT-1.1.C		+ Check tolerance
SETTING		+ cm3/1000s. : +- 3.0
	500	†
Rated speed rpm		DDEALANAN
Pressure hPa	: 1000	+ BREAKAWAY
rack travel mm Tolerance mm	: 13.30	†
Tolerance mm	: 0.05	† 2
		+ Rack travel in mm : 12.30
MEASUREMENT		+ Rated speed rpm : 1345
<u> </u>		Tolerance 1/min : +- 5
Pressure hPa	: -	†
Rated speed rpm		†
Tolerance mm	: 0.10	
		+ STARTING FUEL DELIVERY
Rated speed rpm	: 500	†
		+ Rated speed rpm : 100
Pressure hPa		+ Del. quantity
rack travel mm		cm3/1000 strokes : 150.0
Tolerance mm	: +- 0.10	+ Tolerance
		+ cm3/1000 strokes : +- 5.0
Pressure hPa	: 300	+ Check tolerance
rack travel mm	: 1.00	+ cm3/1000s. : +- 8.0
Tolerance mm	: ← 0.10	+
		+
		 †
START CUT-OUT		104.70.5
Nakad awaad	. > 400	+ LOW IDLE
Rated speed rpm	: > 100	Rated speed rpm : 300
Rated speed rpm	: < 200	The state of the s
		+ Del. quantity + cm3/1000 strokes : 12.0
Nt 1		- CM3/(1881) CTPAMAC * 1/11
speed 1/min	: > 80	† Tolerance
speed 1/min Check		Tolerance cm3/1000 strokes : +- 2.0
speed 1/min Check	: > 80 : < 220	Tolerance cm3/1000 strokes : +- 2.0 Check tolerance
peed 1/min heck		Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5
speed 1/min Sheck speed 1/min	: < 220	Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed
speed 1/min Check speed 1/min	: < 220	Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance
peed 1/min heck peed 1/min UEL DELIVERY CHA	: < 220	Tolerance - cm3/1000 strokes : +- 2.0 - Check tolerance - cm3/1000s. : +- 4.5 Spreed - Tolerance - cm3/1000 strokes : 3.5
speed 1/min check speed 1/min FUEL DELIVERY CHA	: < 220 RACTERISTICS	Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance
Check speed 1/min Check speed 1/min FUEL DELIVERY CHA	: < 220	Tolerance - cm3/1000 strokes : +- 2.0 - Check tolerance - cm3/1000s. : +- 4.5 Spreed - Tolerance - cm3/1000 strokes : 3.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.06.96 Test oil : ISO 4113

Combination No. : 9 400 085 384

Injection pump

Pump designation : PES4A95D410RS2887 EP type number : 9 400 084 040

Governor

Governer design. : RQV300...1300AB1307L

Governer no. : 9 420 080 385

Cust. part No. : 0260745402

Customer-spec. information

Customer : MBB
Motor : CM 364A/ EURO I

Motor : CM 364A/ : 81.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.05
Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 85.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : \leftarrow 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

3.5

Check tolerance cm3/1000s.

8.0

Rated speed rpm :

300

+	Tolerance
1	cm3/1000 strokes : +- 1.0
Rack travel in mm: 8.20	Check tolerance
Tolerance mm : + 0.10	cm3/1000s. : +- 3.0
Del. quantity	Spreed
	Tolerance
Tolerance	cm3/1000 strokes : 3.5
cm3/1000 strokes : + 2.0 +	Check tolerance
Check tolerance +	cm3/1000s. : 8.0
cm3/1000s. : $+-$ 4.5	
Spreed	
Tolerance	
cm3/1000 strokes : 5.5	CONTROL LEVER
Check tolerance	CONTINOL LEVEN
	assets I lavas
cm3/1000s. : 9.0 +	control lever
†	position degree : 59.0
+	tolerance degree : +- 4.0
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR +	control lever
1	position degree : 110.0
	tolerance degree : +- 4.0
CHINE SLEEVE TRAVEL	toterance degree . 1 4.0
GUIDE SLEEVE TRAVEL	DATER CREEK
700	RATED SPEED
Rated speed rpm : 300 +	
guide sleeve +	rack travel mm : 10.00
travel mm : 1.05 +	Rated speed rpm : 1345
Tolerance mm : $+-$ 0.25	Tolerance 1/min : + 5
1	
Rated speed rpm : 1500	rack travel mm : 4.00
guide sleeve +	
travel mm : 8.55 +	Tolerance 1/min : +- 15
Tolerance mm : + 0.05 +	
+	rack travel mm : 0.50
Rated speed rpm : 500 +	Tolerance mm : +- 0.50
guide sleeve	Rated speed rpm : 1640
travel mm : 2.55	
Tolerance mm : + 0.25	
Toterarite iikii	
750	LOUIDIE
Rated speed rpm : 750 +	LOW IDLE
guide sleeve	
travel mm : 4.20	
Tolerance mm : + 0.10 +	control lever
+	position degree : 71.0
 }	tolerance degree : +- 4.0
CUITAGE OF CONTENTS	<u> - </u>
GUIDE SLEEVE POSITION +	
GUIDE SLEEVE POSITION	control lever
+	control lever
Rated speed rpm : 1500	position degree : 22.0
Rated speed rpm : 1500	
Rated speed rpm : 1500 + Rack travel in mm : 16.50 +	position degree : 22.0 tolerance degree : +- 4.0
Rated speed rpm : 1500	position degree : 22.0
Rated speed rpm : 1500 + Rack travel in mm : 16.50 +	position degree : 22.0 tolerance degree : +- 4.0
Rated speed rpm : 1500 + Rack travel in mm : 16.50 +	position degree : 22.0 tolerance degree : + 4.0 Testing:
Rated speed rpm : 1500 Rack travel in mm : 16.50 Tolerance mm : + 1.30	position degree : 22.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300
Rated speed rpm : 1500 + Rack travel in mm : 16.50 +	position degree : 22.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 8.20
Rated speed rpm : 1500 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP	position degree : 22.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300
Rated speed rpm : 1500 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300	position degree : 22.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 8.20 Tolerance mm : + 0.10
Rated speed rpm : 1500 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure	position degree : 22.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 8.20
Rated speed rpm : 1500 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : 700	position degree : 22.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 8.20 Tolerance mm : + 0.10 Rated speed rpm : 100
Rated speed rpm : 1500 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : 700	position degree : 22.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 8.20 Tolerance mm : + 0.10
Rated speed rpm : 1500 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : 700 Del. quantity	position degree : 22.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 8.20 Tolerance mm : + 0.10 Rated speed rpm : 100
Rated speed rpm : 1500 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : 700	position degree : 22.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 8.20 Tolerance mm : + 0.10 Rated speed rpm : 100

		†
TORQUE CONTROL		+ Aneroid pressure + hPa : 700
TURQUE CUNTRUL		+ hPa : 700 + Rated speed rpm : 800
Rated speed rpm	: 1300	+ Del. quantity
rack travel mm	: 11.05	+ cm3/1000 strokes : 81.5
rack travel mm Tolerance mm	: +- 0.05	+ Tolerance
	410	+ cm3/1000 strokes : +- 2.0
Rated speed rpm	: 640	+ Check tolerance
rack travel mm Tolerance mm	: 11.95 : +- 0.05	+ cm3/1000s. : +- 4.0
roterance imi	0.05	Aneroid pressure
Rated speed rpm	: 950	hPa : -
rack travel mm	: 11.35	Rated speed rpm : 500
Tolerance mm	: +- 0.05	+ Del. quantity
		+ cm3/1000 strokes : 57.5
Rated speed rpm rack travel mm Tolerance mm	: 800	+ Tolerance
rack travel mm	11.65	+ cm3/1000 strokes : +- 1.0
loterance mm	; - 0.05	+ Check tolerance + cm3/1000s. : +- 3.0
	<u> </u>	— — — — — — — — — — — — — — — — — — —
ANEROID/ALTITUDE		
COMPENSATOR TEST		+ BREAKAWAY
		†
0000000		Deals travel in many 10,00
SETTING		Rack travel in mm : 10.00 Rated speed rpm : 1345
Rated speed rpm	• 500	+ Tolerance 1/min : +- 5
Pressure hPa	: 700	T TOCETAINCE TAINTITE . T = 3
rack travel mm		
Tolerance mm		
		+ STARTING FUEL DELIVERY
MEASUREMENT		+
_		+ Rated speed rpm : 100
Pressure hPa		+ rack travel mm : 14.20
Rated speed rpm	: 500	Tolerance mm : +- 0.10
Dodayl opend nom	: 500	+ Del. quantity + cm3/1000 strokes : 82.5
Rated speed rpm	. טטט	+ Tolerance
Pressure hPa	: 240	- cm3/1000 strokes : +- 7.5
rack travel mm		+ Check tolerance
Tolerance mm		+ cm3/1000s. : +- 10.0
		+
Pressure hPa	: 350	†
rack travel mm		
Tolerance mm	: +- 0.10	LOW IDLE
START CUT-OUT		Rated speed rpm : 300
		+ Del. quantity
Rated speed rpm		+ cm3/1000 strokes : 13.0
Rated speed rpm	: < 250	+ Tolerance
		- cm3/1000 strokes : +- 2.0
Check	: > 80	+ Check tolerance + cm3/1000s. : +- 4.5
speed 1/min	; > 80	+ cm3/10005. : +- 4.3 + Spreed
Check	: < 260	+ Tolerance
speed 1/min	. \ 200	- cm3/1000 strokes : 5.5
		- Check tolerance
FUEL DELIVERY CHA	ARACTERISTICS	+ cm3/1000s. : 9.0
. TEE RESTARIS ON		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23,05,96 : ISO 4113

Combination No. : 9 400 085 385

Injection pump

Pump designation : PES6A95D410RS2886

EP type number : 9 400 084 039

Governor

Governer design. : RQV300...1300AB1306L

Governer no. : 9 420 080 384

Cust. part No. : 0260745502

Customer-spec. information : MBB Customer : OM 366 A Motor

Power KW

: 125.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

rest pressure bar : 26.0 Tolerance bar : +- 1.0 26.0

Prestroke mm : 3.00 : +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 10.65 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 81.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1200s.

: +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s.

8.0

Rated speed rpm : 300	Del. quantity cm3/1000 strokes : 81.0 Tolerance cm3/1000 strokes : +- 1.0
Rack travel in mm : 8.00 Tolerance mm : ← 0.10	Check tolerance cm3/1000s. : +- 3.0
Del. quantity cm3/1000 strokes : 10.5 Tolerance	+ Spreed + Tolerance + cm3/1000 strokes : 3.5
cm3/1000 strokes : +- 2.0 Check tolerance	Check tolerance cm3/1000S. : 8.0
cm3/1000s. : +- 4.5 Spreed	‡
Tolerance cm3/1000 strokes : 5.5 Check tolerance	CONTROL LEVER
cm3/1000s. : 9.0	control lever position degree : 59.0
(B) SETTING OF INJECTION PUMP	+ tolerance degree : +- 4.0
WITH GOVERNOR	control lever
	<pre>position degree : 108.0 tolerance degree : +- 4.0</pre>
GUIDE SLEEVE TRAVEL	RATED SPEED
Rated speed rpm : 300 guide sleeve	+ rack travel mm : 9.60
travel mm : 1.05	Rated speed rpm : 1355
Tolerance mm : + 0.25	Tolerance 1/min : +- 5
Rated speed rpm : 1500 guide sleeve	rack travel mm : 4.00 Rated speed rpm : 1485
travel mm : 8.55 Tolerance mm : +- 0.05	+ Tolerance 1/min : +- 15
Rated speed rpm : 500	+ rack travel mm : 0.50 + Tolerance mm : +- 0.50
guide sleeve	Rated speed rpm : 1600
travel mm : 2.55	†
Tolerance mm : + 0.25	ļ
Rated speed rpm : 750 guide sleeve	+ LOW IDLE
travel mm : 4.20 Tolerance mm : +- 0.10	† + control lever
	position degree : 70.0
GUIDE SLEEVE POSITION	tolerance degree : +- 4.0
Rated speed rpm : 1500	position degree : 22.0 tolerance degree : +- 4.0
Rack travel in mm : 16.50 Tolerance mm : +- 1.30	Testing:
	Rated speed rpm : 300
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 8.00 Tolerance mm : +- 0.10
Rated speed rpm : 1300 Aneroid pressure	Rated speed rpm : 100
hPa : 900	+ CRT mm min. :> 9.50

		+
Rated speed rpm	: 375	FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL		Aneroid pressure hPa : 900
Rated speed rpm		Rated speed rpm : 700
rack travel mm Tolerance mm		Del. quantity cm3/1000 strokes : 79.0
Rated speed rpm rack travel mm		<pre>+ Tolerance + cm3/1000 strokes : +- 2.0 + Check tolerance</pre>
Tolerance mm	: + 0.05	cm3/1000s. : +- 4.0
Rated speed rpm rack travel mm		Aneroid pressure hPa : 900
Tolerance mm	: +- 0.05	+ Rated speed rpm : 800 + Del. quantity
Rated speed rpm rack travel mm	: 1030 : 10.85	cm3/1000 strokes : 78.0 Tolerance
rack travel mm Tolerance mm	: +- 0.05	cm3/1000 strokes : +- 2.0 Check tolerance
ANEROID/ALTITUDE		+ cm3/1000s. : +- 4.0
COMPENSATOR TEST		Aneroid pressure hPa : -
SETTING		Rated speed rpm : 500 Del. quantity
	. 500	+ cm3/1000 strokes : 50.0
Rated speed rpm Pressure hPa	: 900	Tolerance cm3/1000 strokes : + 1.0
rack travel mm Tolerance mm	: 11.55 : + 0.05	+ Check tolerance - cm3/1000s. : +- 3.0
MEASUREMENT		BREAKAWAY
Pressure hPa	: – : 500	1
Rated speed rpm		Rack travel in mm : 9.60
Rated speed rpm		Rated speed rpm : 1355 Tolerance 1/min : +- 5
Pressure hPa rack travel mm	: 250 : 0.50	‡
Tolerance mm	: +- 0.10	STARTING FUEL DELIVERY
Pressure hPa	: 390 : 1.35	Rated speed rpm : 100
rack travel mm Tolerance mm	: + 0.05	rack travel mm : 13.80
		Tolerance mm : +- 0.10 Del. quantity
START CUT-OUT		+ cm3/1000 strokes : 78.0 + Tolerance
Rated speed rpm Rated speed rpm		cm3/1000 strokes : +- 7.5 Check tolerance
Check		+ cm3/1000s. : +- 10.0
speed 1/min Check	: > 80	‡
speed 1/min	: < 260	LOW IDLE

Rated speed rpm Del. quantity	:	300
cm3/1000 strokes	:	10.5
Tolerance cm3/1000 strokes	: +-	2.0
Check tolerance cm3/1000s.	: +-	4.5
Spreed Tolerance		
cm3/1000 strokes Check tolerance	:	5.5
cm3/1000s.	:	9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 04.07.96 : ISO 4113

Combination No. : 9 400 085 393

Injection pump

Pump designation : PES4A95D410RS2887

EP type number : 9 400 084 040

Governor

Governer design. : RQV300...1300AB1311L

Governer no.

: 9 420 080 390

Cust. part No. : 0260746802

Customer-spec. information Customer : MBB

Motor

: OM 364 LA/EURO I

Power KW

: 100.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

173.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

26.0 Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 3.00

Tolerance mm : +- 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50

: +- 1.50 Tolerance mm

: 1-3-4-2 Firing order

Phasing : 0-90-180-270

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 12.45

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 99.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

3.0 cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes :

3.5

Check tolerance

cm3/1000s.

8.0

Rated speed rpm :

300

L05

Rack travel in mm : 8.30 Tolerance mm : + 0.10 Del, quantity Com3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : 4.5 Tolerance Cm3/1000 strokes : + 2.0 Check tolerance Cm3/1000 strokes : 5.5 Check tolerance Cm3/1000 strokes : 5.5 Spreed Tolerance Cm3/1000 strokes : 5.5 Check tolerance Cm3/1000 strokes : 6.2.0 Tolerance Cm3/1000 strokes : 5.5 Check tolerance Cm3/1000 strokes : 6.2.0 Tolerance Cm3/1000 strokes : 6.2.0 Tolerance Cm3/1000 strokes : 6.2.0 Tolerance Cm3/1000 strokes : 6.2.0 Tolerance Cm3/1000 strokes : 6.2.0 Tolerance Cm3/1000 strokes : 6.2.0 Tolerance Cm3/1000 strokes : 6.2.0 Tolerance Cm3/1000 strokes : 6.2.0 Tolerance Cm3/1000 strokes : 6.2.0 Tolerance Cm3/1000 strokes : 6.2.0 Tolerance Cm3/1000 strokes : 6.2.0 Tolerance Cm3/1000 strokes : 6.2.0 Tolerance Cm3/1000 strokes : 6.2.0 Tolerance Cm3/1000 strokes : 6.2.0 Tolerance degree : 4.0 Tolerance degree : 4.0 Tolerance degree : 4.0 Tolerance mm : 11.40 Rated speed rpm : 11.40 Rated speed rpm : 1500 Tolerance mm : 4.00 Toleran		 	Tolerance cm3/1000 strokes	: ← 1.0
Del. quantity cnd3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000s. : 8.0 CONTROL LEVER Control Lever position degree : 62.0 control lever position degree : + 4.0 CONTROL LEVER Control Lever position degree : + 4.0 Control lever position degree : + 4.0 Control lever position degree : 111.0 control lever position degree : 111.0 control lever position degree : + 4.0 Control lever position degree : 111.0 control lever position degree : 111.0 control lever position degree : 111.0 control lever position degree : - 4.0 Rated speed rpm : 1500 Rated speed rpm : 1510 Guide sleeve travel mm : 4.00 Rated speed rpm : 1510 Tolerance nm : + 0.05 Rated speed rpm : 500 Guide sleeve travel mm : 2.55 Tolerance nm : + 0.25 Rated speed rpm : 500 Guide sleeve travel mm : 2.55 Tolerance nm : + 0.25 Rated speed rpm : 500 Guide sleeve travel mm : 2.55 Tolerance nm : + 0.25 Rated speed rpm : 1500 Rated speed rpm : 1640 Control lever position degree : 71.0 control lever position degree : + 4.0 Control lever pos			- Check tolerance	. 7.0
cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : 3.5 cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : 8.0 cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000s. : 9.0 CONTROL LEVER Check tolerance cm3/1000s. : 9.0 CONTROL LEVER Check tolerance cm3/1000s. : 9.0 CONTROL LEVER Check tolerance cm3/1000s. : 9.0 CONTROL LEVER Check tolerance cm3/1000s. : 8.0 CONTROL LEVER Control lever position degree : 4.0 Control lever position degree : 4.0 GUIDE SLEEVE TRAVEL RATED SPEED Rated speed rpm : 300 RATED SPEED Rated speed rpm : 1.05 Rated speed rpm : 1345 Tolerance mm : + 0.25 Tolerance 1/min : + 5 Rated speed rpm : 8.55 Tolerance 1/min : + 5 Tolerance mm : + 0.05 Rated speed rpm : 1510 Rated speed rpm : 500 Rated speed rpm : 0.50 Rated speed rpm : 500 Tolerance mm : + 0.50 Rated speed rpm : 750 LOW IDLE GUIDE SLEEVE POSITION Control lever position degree : + 4.0 GUIDE SLEEVE POSITION Control lever position degree : + 4.0 Rated speed rpm : 1500		: + 0.70		: +- 3.0
Tolerance cm3/1000 strokes : + 2.0		: 12.0	•	
Check tolerance cm3/1000s. : → 4.5 Spreed Tolerance cm3/1000s. : → 5.5 Check tolerance cm3/1000s. : 9.0 Cm3/1000s. : 9.0 CM SETTING OF INJECTION PUMP WITH GOVERNOR control lever position degree : ← 4.0 GUIDE SLEEVE TRAVEL RATED SPEED Rated speed rpm : 300 guide sleeve travel mm : ↑ 1.05 RATED SPEED Rated speed rpm : 1500 guide sleeve travel mm : ♣ 5.5 Tolerance 1/min : ← 5 Tolerance mm : ♣ 0.25 Tolerance 1/min : ← 15 Tolerance mm : ♣ 0.05 Tolerance 1/min : ← 15 Rated speed rpm : 2.55 Tolerance mm : ♠ 0.05 Tolerance 1/min : ← 15 Rated speed rpm : 2.55 Tolerance mm : ♠ 0.25 Tolerance mm : ♠ 0.50 Rated speed rpm : 750 guide sleeve travel mm : ♠ 0.25 LOW IDLE Tolerance mm : ♠ 0.25 LOW IDLE GUIDE SLEEVE POSITION control lever position degree : 71.0 tolerance degree : ♠ 4.0 Rated speed rpm : 1500 control lever position degree : 22.0 tolerance degree : ♠ 4.0 Tolerance mm : ♠ 0.10 control lever position degree : 71.0 tolerance degree : ♠ 4.0 Tolerance mm : ♠ 0.10 control lever position degree : 22.0 tolerance degree : ♠ 4.0 Tolerance mm : ♠ 0.10 <	Tolerance	+		: 3.5
cm3/1000S. : → 4.5 Spreed Tolerance cm3/1000 strokes : 5.5 Check tolerance control lever cm3/1000S. : 9.0 (B) SETTING OF INJECTION PUMP control lever WITH GOVERNOR control lever GUIDE SLEEVE TRAVEL RATED SPEED Rated speed rpm : 300 guide sleeve travel mm : 1.05 travel mm : 4.00 Rated speed rpm : 1500 guide sleeve rack travel mm : 4.00 Rated speed rpm : 8.55 Tolerance 1/min : + 5 Tolerance mm : + 0.05 Rated speed rpm : 1510 Rated speed rpm : 500 Tolerance 1/min : + 15 Rated speed rpm : 0.50 Tolerance 1/min : + 0.50 Rated speed rpm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 0.50 Rated speed rpm : 1640 Tolerance mm : + 0.25 LOW IDLE GUIDE SLEEVE POSITION control lever position degree : 71.0 Tolerance mm :		: +- 2.0		
Spreed Tolerance			- cm3/1000s.	: 8.0
Tolerance cm3/100D strokes : 5.5 Check tolerance cm3/100Ds. : 9.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.05 Tolerance mm : + 0.05 Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 4.20 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 1500 Guide sleeve travel mm : 2.55 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 1500 Guide sleeve Travel mm : 4.20 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 1500 Guide sleeve Travel mm : 4.20 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 1500 Rated speed rpm : 1500 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 1500 Tolerance mm : + 0.10 GUIDE SLEEVE POSITION Rated speed rpm : 1500 Rated speed rpm : 300 Tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Control lever		: — 4.5	•	
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(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel mm : 1.05 Tolerance mm : + 0.25 Rated speed rpm : 3500 guide sleeve travel mm : 8.55 Tolerance mm : + 0.05 Rated speed rpm : 500 guide sleeve travel mm : 2.55 Tolerance mm : + 0.05 Rated speed rpm : 750 guide sleeve travel mm : 2.55 Tolerance mm : + 0.25 Rated speed rpm : 750 guide sleeve travel mm : 2.55 Tolerance mm : + 0.10 Rated speed rpm : 750 Guide sleeve travel mm : 4.20 Tolerance mm : + 0.10 Fated speed rpm : 1500 Rated speed rpm : 750 Guide sleeve travel mm : 2.55 Tolerance mm : + 0.10 Fated speed rpm : 750 Guide sleeve travel mm : 4.20 Tolerance mm : + 0.10 Fated speed rpm : 1500 Rated speed rpm : 300 Tolerance mm : + 0.10 Fated speed rpm : 1500 Rated speed rpm : 1500 Rated speed rpm : 1500 Rated speed rpm : 1500 Rated speed rpm : 1500 Rated speed rpm : 1500 Rated speed rpm : 1500 Rated speed rpm : 1500 Rated speed rpm : 300 Tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Tolerance mm : + 0.10 Rated speed rpm : 300 Tolerance degree : + 4.0 Control lever position degree : 71.0 Tolerance degree : + 4.0 Control lever position degree : 22.0 tolerance degree : + 4.0 Control lever position degree : 71.0 Tolerance mm : + 0.10 Rated speed rpm : 300 Tolerance mm : + 0.10 Rated speed rpm : 300 Rated speed rpm : 300 Tolerance mm : + 0.10 Rated speed rpm : 300 Rated speed rpm : 30		. 00		
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(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 300 guide sleeve travel nm : 1.05 Tolerance mm : + 0.25 Rated speed rpm : 3500 guide sleeve travel nm : 4.00 guide sleeve travel nm : 4.00 guide sleeve travel nm : 4.00 guide sleeve travel nm : 4.00 guide sleeve travel nm : 4.05 Rated speed rpm : 1510 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 15 Tolerance 1/min : + 5 Rated speed rpm : 1500 Rated speed rpm : 1500 Rated speed rpm : 0.50 Rated speed rpm : 1640 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 300 rack travel mm : 8.30 Tolerance degree : + 4.0 Rated speed rpm : 300 rack travel mm : 8.30 Tolerance degree : + 4.0 Rated speed rpm : 300 rack travel mm : 8.30 Tolerance degree : + 4.0 Control lever position degree : 71.0 tolerance degree : + 4.0 Rated speed rpm : 300 rack travel mm : 8.30 Tolerance mm : + 0.10 Rated speed rpm : 300 rack travel mm : 8.30 Tolerance mm : + 0.10 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100				
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## Tolerance degree : ← 4.0 ## ATED SPEED ## RATED SPEED #	WITH GOVERNOR	+		444.0
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Tolerance degree : +- 4.0 GUIDE SLEEVE POSITION Rated speed rpm : 1500	roterance inii	0.10		: 71.0
Rated speed rpm : 1500				
Rated speed rpm : 1500 Rack travel in mm : 16.50 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Rated speed rpm : 1300 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 99.0	GUIDE SLEEVE POSI	TION +		
Rack travel in mm: 16.50 Tolerance mm: + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 300 rack travel mm: 8.30 Tolerance mm: + 0.10 Rated speed rpm: 1300 Aneroid pressure hPa: 700 Del. quantity cm3/1000 strokes: 99.0	Datad speed spe	. 1500		• 22 0
Rack travel in mm: 16.50 Tolerance mm: + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 300 rack travel mm: 8.30 Tolerance mm: + 0.10 Rated speed rpm: 1300 Aneroid pressure hPa: 700 Del. quantity cm3/1000 strokes: 99.0 Testing: Rated speed rpm: 300 rack travel mm: 0.10 Rated speed rpm: 100 Rated speed rpm: 100 CRT mm min. :> 9.80	kated speed rpm	: 1300		
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 300 Rated speed rpm : 8.30 Tolerance mm : 4.0.10 Rated speed rpm : 100 Rated speed rpm : 100 Rated speed rpm : 100 CRT mm min. :> 9.80 CRT mm min. :> 9.80	Rack travel in mm	: 16.50		
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 99.0 Analy Load Stope	Tolerance mm	: +- 1.30	Testing:	
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1300 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 99.0 Analy Load Stope			. Dated speed spm	• 300
Rated speed rpm : 1300 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 99.0 Tolerance mm : +- 0.10 Rated speed rpm : 100 CRT mm min. : > 9.80	FULL LOAD DELTVERY	Y AT FULL LOAD STOP		
Rated speed rpm : 1300 Aneroid pressure hPa : 700 Del. quantity cm3/1000 strokes : 99.0 Aneroid pressure CRT mm min. : > 9.80	TOUR COMP DECISE!	+		
hPa : 700 + CRT mm min. :> 9.80 cm3/1000 strokes : 99.0 +		: 1300		
Del. quantity + CRT mm min. : > 9.80 cm3/1000 strokes : 99.0 +		. 700	Rated speed rpm	: 100
cm3/1000 strokes : 99.0 +		: 100	CRT mm min	:> 9.80
		: 99.0	CIVI IIMII III III	
		1	Rated speed rpm	: 415

: +- 4.0 essure : - 500 ty rokes : 51.5 erokes : +- 1.0 erance : +- 3.0 in mm : 11.40 I rpm : 1345 /min : +- 5
rpm : 500 ty 51.5 rokes : 51.5 rokes : +- 1.0 rom : 11.40 rpm : 1345
ty rokes: 51.5 rokes: +- 1.0 rance : +- 3.0 in mm: 11.40 rpm: 1345
ty rokes: 51.5 rokes: +- 1.0 rance : +- 3.0 in mm: 11.40 rpm: 1345
in mm: 11.40
: +- 3.0 in mm: 11.40 Irpm: 1345
in mm: 11.40 Irpm: 1345
lrpm : 1345
lrpm : 1345
EL DELIVERY
rpm : 100
mm : 13.70
m : + 0.10
ty rokes : 75.0
rokes: 75.U
nales
rokes : +- 7.5
ance
: +- 10.0
rpm : 300
ty
rokes : 12.0
rokes : +- 2.0
ance
: +- 4.5
rokes: 5.5
ance : 9.0
specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 12.07.96 Test oil : ISO 4113

Combination No. : 9 400 085 396

Injection pump

Pump designation : PES6A95D410RS2886 EP type number : 9 400 084 039

Governor

Governer design. : RQV300...1300AB1312L

Governer no. : 9 420 080 391

Cust. part No. : 0260749602

Customer-spec. information

Customer : MBB

: OM 366LA/EURO I Motor

: 170.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 : + 1.5 Tolerance bar

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

3.00 Prestroke mm : : +- 0.05 Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 12.25 : +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 109.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

3.5 cm3/1000 strokes :

Check tolerance

cm3/1000s. 8.0

700	+ Del. quantity
Rated speed rpm : 300	+ cm3/1000 strokes : 109.0
	+ Tolerance
Rack travel in mm : 7.50	+ cm3/1000 strokes : +- 1.0 + Check tolerance
Tolerance mm : + 0.10	+ cm3/1000s. : +- 3.0
Del. quantity	Spreed 5.0
cm3/1000 strokes : 16.5	+ Tolerance
Tolerance	+ cm3/1000 strokes : 3.5
cm3/1000 strokes : +- 2.0	- Check tolerance
Check tolerance	+ cm3/1000s. : 8.0
cm3/1000s. : +- 4.5	}
Spreed	+
Tolerance	+
cm3/1000 strokes : 5.5	+ CONTROL LEVER
Check tolerance	+
cm3/1000s. : 9.0	+ control lever
	position degree : 60.0
(D) CETTING OF INJECTION PHIMP	tolerance degree : +- 4.0
(B) SETTING OF INJECTION PUMP	t control lever
WITH GOVERNOR	+ control tever + position degree : 110.0
	tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	Local unite degree . 4.5
GOIDE OFFICE WASE	+ RATED SPEED
Rated speed rpm : 300	1
guide sleeve	rack travel mm : 11.20
travel mm : 1.05	Rated speed rpm : 1350
Tolerance mm : + 0.25	+ Tolerance 1/min : +- 5
	+
Rated speed rpm : 1500	+ rack travel mm : 4.00
guide sleeve	+ Rated speed rpm : 1515
travel mm : 8.55	+ Tolerance 1/min : +- 15
Tolerance mm : + 0.05	0.50
Rated speed rpm : 500	+ rack travel mm : 0.50 + Tolerance mm : +- 0.50
The second of th	Rated speed rpm : 1650
guide sleeve travel mm : 2.55	T Rated speed (piii : 1030
Tolerance mm : + 0.25	\perp
TOTEL AND THE THE	
Rated speed rpm : 750	LOW IDLE
guide sleeve	+
travel mm : 4.20	†
Tolerance mm : +- 0.10	+ control lever
	position degree : 69.0
CHILD OF THE DOCTION	tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	t control lever
Rated speed rpm : 1500	position degree : 20.0
Nated Speed I pill . 1900	tolerance degree : +- 4.0
Rack travel in mm : 16.50	1
Tolerance mm : +- 1.30	+ Testing:
	+
	+ Rated speed rpm : 300
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 7.50
0.4.1.00.1.00	Tolerance mm : + 0.10
Rated speed rpm : 1300	Rated speed rpm : 100
Aneroid pressure hPa : 1200	+ Rated speed rpm : 100
in a . (200	T CRT mm min. :> 8.80
	1 200 000

Rated speed rpm	: 375	<u> </u>
· · · · · ·		FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL		Aneroid pressure hPa : 1200
Rated speed rpm	: 1300	Rated speed rpm : 700
rack travel mm		+ Del. quantity
rack travel mm Tolerance mm	: +- 0.05	cm3/1000 strokes : 111.0 Tolerance
Rated speed rpm	; 700	cm3/1000 strokes : +- 2.0
rack travel mm		+ Check tolerance
Tolerance mm	: +- 0.05	← cm3/1000s. : ← 4.0
Rated speed rpm	: 950 : 12.75	Aneroid pressure
rack travel mm Tolerance mm	: 12.75	+ hPa : 1200
Tolerance mm	: +- 0.05	Rated speed rpm : 950
Dakad anasal moss	. 42/0	+ Del. quantity + cm3/1000 strokes : 111.5
Rated speed rpm	; 124U , 10 05	+ cm3/1000 strokes : 111.5 + Tolerance
rack travel mm Tolerance mm	: +- 0 05	+ cm3/1000 strokes : +- 2.0
TO COT GLICE THIS	0.02	Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST		+ + Aneroid pressure
COMPENSATOR TEST		+ hPa : -
		Rated speed rpm : 500
SETTING		+ Del. quantity
		+ cm3/1000 strokes : 54.0
Rated speed rpm	: 500	† Tolerance
Pressure hPa	: 1200	+ cm3/1000 strokes : +- 1.0
rack travel mm		+ Check tolerance
Tolerance mm	: +- 0.05	+ cm3/1000s. : +- 3.0
MEASUREMENT		BREAKAWAY
Pressure hPa	: -	DICAKANA I
Rated speed rpm	: 500	+
		Rack travel in mm : 11.20
Rated speed rpm	: 500	+ Rated speed rpm : 1350
	440	+ Tolerance 1/min : +- 5
Pressure hPa	: 660 : 2.40	†
rack travel mm Tolerance mm	: + 0.10	
TOCE! diffe that	0.10	STARTING FUEL DELIVERY
Pressure hPa	: 410	+
rack travel mm	: 1.35	+ Rated speed rpm : 100
Tolerance mm	: +- 0.05	rack travel mm : 15.00
		Tolerance mm : +- 0.10
START CUT-OUT		
SIAKI CU!~UU!		+ Tolerance
Rated speed rpm	: > 100	+ cm3/1000 strokes : +- 7.5
Rated speed rpm		+ Check tolerance
- 1		+ cm3/1000s. : + 10.0
Check		+
speed 1/min	: > 80	†
Check	: < 240	İ
speed 1/min	: < 240	LOW IDLE
		T. COM INCL

Rated speed rpm	:		300
Del. quantity cm3/1000 strokes	:		16.5
Tolerance cm3/1000 strokes	:	+	2.0
Check tolerance cm3/1000s.	:	+-	4.5
Spreed Tolerance			
cm3/1000 strokes	:		5.5
Check tolerance cm3/1000s.	:		9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 24.07.96 Test oil : ISO 4113

Combination No. : 9 407 083 286

Injection pump

Pump designation : PES6A80D320RS1271 EP type number : 9 400 083 058

Governor

Governer design. : RSV350...1500A2B2028

: -1R

Governer no. : 9 420 083 175

Cust. part No. :

Customer-spec. information Customer : MWM

Motor : D 229-6

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 003

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.25
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Beginning of delivery differende

and maximum rack

travel : 10.50
Tolerance mm : +- 1.50
Difference ° CS : 4.50

BASIC SETTING

Rated speed rpm : 1480

Rack travel in mm : 9.25
Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 50.0

Tolerance

cm3/1000 strokes : +- 0.5

Check tolerance

cm3/1000s. : +- 2.0

	+
Spreed	+ control lever
Tolerance	position degree : 60.0
cm3/1000 strokes : 2.5	tolerance degree : +- 4.0
(1111) 1000 311 0/63 . 2.7	1 total and degree . 4.0
Check tolerance	RATED SPEED
cm3/1000s. : 4.0	T MATEU STEED
Cm5/10005 4.0	rack travel mm : 8.20
Dahad award man	
Rated speed rpm : 350	Rated speed rpm : 1525
	† Tolerance 1/min : +- 5
7.00	/ 00
Rack travel in mm: 7.00	+ rack travel mm : 4.00
Tolerance mm : +- 0.10	+ Rated speed rpm : 1575
Del. quantity	† Tolerance 1/min : +- 15
cm3/1000 strokes : 9.0	†
Tolerance	+ rack travel mm : 0.85
cm3/1000 strokes : + 1.5	+ Tolerance mm : +- 0.55
Check tolerance	+ Rated speed rpm : 1700
$cm3/1000s$. : \leftarrow 3.5	+
Spreed	+
Tolerance	+
cm3/1000 strokes : 4.0	+ LOW IDLE
Check tolerance	1
cm3/1000s. : 6.0	
	+ control lever
	position degree : 20.0
(B) SETTING OF INJECTION PUMP	+ tolerance degree : +- 4.0
WITH GOVERNOR	T total and degree . 4.5
MILL GOAEKIAOK	Setting point w/out bumper spring
	T Setting point wroat builder spring
	Rated speed rpm : 350
CHIEF CLEENE DOCITION	rack travel mm : 6.50
GUIDE SLEEVE POSITION	rack travet mm : 0.50
200	Tankina.
Rated speed rpm : 800	+ Testing:
0.45	750
Rack travel in mm : 0.65	+ Rated speed rpm : 350
Tolerance mm : +- 0.35	+ rack travel mm : 7.00
	+ Tolerance mm : + 0.10
	†
FULL LOAD DELIVERY AT FULL LOAD STOP	+ rack travel mm : 2.00
	+ Rated speed rpm : 630
Rated speed rpm : 1480	+ Tolerance 1/min : +- 30
Aneroid pressure	+
hPa : -	+ Rated speed rpm : 100
Del. quantity	+
cm3/1000 strokes : 50.0	+ CRT mm min. : > 19.00
Tolerance	+
cm3/1000 strokes : + 0.5	+
Check tolerance	+ TORQUE CONTROL
cm3/1000s. : +- 2.0	+
Spreed	Rated speed rpm : 1480
Tolerance	+ rack travel mm : 9.25
cm3/1000 strokes : 2.5	+ Tolerance mm : +- 0.05
Check tolerance	
cm3/1000s. : 4.0	Rated speed rpm : 500
CIIIJ/ 10003 T.U	rack travel mm : 10.85
	+ Tolerance mm : + 0.05
	T TOTAL CONTRACT TOTA
CONTROL LEVED	I Pated speed ppm . 1700
CONTROL LEVER	Rated speed rpm : 1300
	+ rack travel mm : 9.50

Tolerance mm : \leftarrow 0.10

Rated speed rpm : 1000 rack travel mm : 10.35 Tolerance mm : + 0.15

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 500
Del. quantity

cm3/1000 strokes : 52.5

Tolerance

cm3/1000 strokes : +- 1.5

Check tolerance

cm3/1000s. : +- 3.0

Aneroid pressure

hPa : -Rated speed rpm : 1000 Del. quantity

cm3/1000 strokes : 56.5

Tolerance

cm3/1000 strokes : \leftarrow 1.5

Check tolerance

cm3/1000s. : +- 3.0

BREAKAWAY

Rack travel in mm: 8.20
Rated speed rpm: 1525
Tolerance 1/min: + 5

occi and committee in the committee of t

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00

LOW IDLE

Rated speed rpm : 350

Del. quantity

cm3/1000 strokes : 9.0

Tolerance

cm3/1000 strokes : +- 1.5

Check tolerance

cm3/1000s. : +- 3.5

Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 6.0

End of test specification sheet

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Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 18.07.96 Edition : ISO 4113 Test oil

Combination No. : 0 402 736 906

Injection pump

Pump designation : PES6P120A120RS7416 EP type number : 0 412 726 959

Governor

Governer design. : RQV400...1250PA1060

: -4K

Governer no. : 0 421 815 514

Cust. part No. : 3928146

Customer-spec. information : CDC Customer Motor : 6BTA-A : 130.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

: 3.60 Prestroke mm : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

: +- 0.75 tolerance °NW

Start of delivery blocking

*NW after s.o.d. : 6.25 : +- 0.50 Tolerance

Check

: +- 0.75 tolerance *NW

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 13.65

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 160.5	+ Rated speed rpm : 1690 + guide sleeve
Tolerance	+ travel mm : 11.50 + Tolerance mm : + 0.50
cm3/1000 strokes : + 1.0	<u> </u>
Check tolerance cm3/1000s. : +- 4.0	GUIDE SLEEVE POSITION
Spreed Tolerance	Rated speed rpm : 1390 Rack travel in mm : 12.60
cm3/1000 strokes : 8.0	
Check tolerance cm3/1000s. : 12.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 420	Rated speed rpm : 1250 Aneroid pressure hPa : 1200
Rack travel in mm : 6.00	Del. quantity cm3/1000 strokes : 160.5
Tolerance mm : + 0.10 Del. quantity	Tolerance + cm3/1000 strokes : +- 1.0
cm3/1000 strokes : 15.0 Tolerance	Check tolerance cm3/1000s. : +- 4.0
<pre>cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 5.0</pre>	+ Spreed + Tolerance + cm3/1000 strokes : 8.0
Spreed Tolerance	+ Check tolerance + cm3/1000s. : 12.0
cm3/1000 strokes : 4.0 Check tolerance	1
cm3/1000s. : 8.0	CONTROL LEVER
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 117.0 tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL	RATED SPEED
Rated speed rpm : 400 guide sleeve travel mm : 1.44 Tolerance mm : + 0.20	rack travel mm : 12.60 Rated speed rpm : 1325 Tolerance 1/min : +- 15
Rated speed rpm : 1329 guide sleeve	rack travel mm : 4.00 Rated speed rpm : 1475 Tolerance 1/min : +- 5
travel mm : 7.83 Tolerance mm : +- 0.15	rack travel mm : 0.50
Rated speed rpm : 939 guide sleeve	Tolerance mm : +- 0.50 Rated speed rpm : 1550
travel mm : 5.18 Tolerance mm : + 0.25	<u> </u>
Rated speed rpm : 640	LOW IDLE
guide sleeve travel mm : 3.56 Tolerance mm : +- 0.25	control lever position degree : 71.0

tolerance degree	: +- 4.0	+ Rated speed rpm : < 280
Testing:		
Rated speed rpm	. 750	+ Speed 1/11/11 : > 60 + Check
rack travel mm		+ speed 1/min : < 290
Tolerance mm	: + 0.10	T Speed 1/11/11 . \ 290
rocerance min	. +- 0.10	
Rated speed rpm	: 300	FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: > 5.80	Aneroid pressure
		+ hPa : 1200
Rated speed rpm	: 425	+ Rated speed rpm : 800
		🕂 Del. quantity
		— + cm3/1000 strokes : 131.5
TORQUE CONTROL		† Tolerance
		+ cm3/1000 strokes : +- 3.0
Rated speed rpm	: 1250	Check tolerance
rack travel mm	: 13.65	+ cm3/1000s. : +- 6.0
rack travel mm Tolerance mm	: 0.05	Spreed
		+ Tolerance
Rated speed rpm	: 800	+ cm3/1000 strokes : 8.0
rack travel mm		+ Check tolerance
Tolerance mm		+ cm3/1000s. : 12.0
		1
Rated speed rpm	: 500	+ Aneroid pressure
rack travel mm	: 11.60	+ hPa : -
Tolerance mm		Rated speed rpm : 1250
		→ Del. quantity
		+ cm3/1000 strokes : 107.5
ANEROID/ALTITUDE		† Tolerance
COMPENSATOR TEST		+ cm3/1000 strokes : +- 1.0
		+ Check tolerance
		+ cm3/1000s. : +- 4.0
SETTING		+
		
Rated speed rpm		+ BREAKAWAY
Pressure hPa	: 1200	†
447 A		7
MEASUREMENT		Rack travel in mm: 12.60
		+ Rated speed rpm : 1325 + Tolerance 1/min : +- 15
Pressure hPa	1250	† Toterance Timin : +- 15
Rated speed rpm	10.70	†
rack travel mm	: 10.40	T
Tolerance mm	: ← 0.20	STARTING FUEL DELIVERY
Rated speed rpm	• 1250	T STANTING TOLL DELIVERT
varen sheen thii	. 1230	T Rated speed rpm : 100
Pressure hPa	: 375	rack travel mm : 14.10
rack travel mm		+ Tolerance mm : +- 0.50
Tolerance mm	: +- 0.30	+ Del. quantity
IOCEI GINE IIIII		cm3/1000 strokes : 155.0
Pressure hPa	: 260	Tolerance
rack travel mm	· 11 60	+ cm3/1000 strokes : +- 20.0
Tolerance mm	· +- 0.20	Check tolerance
OLEI GIVE HIN	0.20	cm3/1000s. : +- 25.0
		- +
START CUT-OUT		+
		†
Rated speed rpm	: > 100	+
•		

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LOW IDLE

Rated speed rpm : 420
Del. quantity
cm3/1000 strokes : 15.0
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 5.0
Spreed
Tolerance
cm3/1000 strokes : 4.0
Check tolerance
cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23.07.96 : ISO 4113

Combination No. : 0 402 746 643

Injection pump

Pump designation : PES6P120A320LS7362

EP type number : 0 412 726 929

Governor

Governer design. : RQV350...1100PA1201K

Governer no. : 0 421 815 456

Cust. part No. : 1824681091

Customer-spec. information : NAVISTAR Customer

Motor Power KW

: DTA-530 : 245.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

40

Tolerance °C

: + 2.0

Overflow valve : 2 417 413 076

Inlet press. bar :

2.8

Tolerance bar

: +- 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

208.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 600 x length mm

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +-1.0

Prestroke mm 2.98 : +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

: +- 0.30 Tolerance

Check

tolerance °NW : +~ 0.75

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 14.65 : +- 0.05

Tolerance mm

Del. quantity

cm3/1000 strokes : 278.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. 4.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

	L	Tolerance 1/min	: +- 5	
Check tolerance	I	Toterance Thirm	. +-	
cm3/1000s. : 12.0	+	rack travel mm	: 0.50	
250	+	Tolerance mm		
Rated speed rpm : 350	İ	Rated speed rpm	: 1225	
	Ţ			
Rack travel in mm : 5.90	+			
Tolerance mm : +- 0.10	†	LOW IDLE		
Del. quantity cm3/1000 strokes : 24.0	İ			
Tolerance	Į	control lever		
$cm3/1000$ strokes : \leftarrow 3.0	+	position degree		
Check tolerance	+	tolerance degree	: +- 6.0	
cm3/1000S. : +- 5.0 Spreed	†	Testing:		
Tolerance	Ī	resung.		
cm3/1000 strokes : 5.0	+	Rated speed rpm	: 350	
Check tolerance	+	rack travel mm		
cm3/1000s. : 9.0	†	Tolerance mm	: +- 0.10	
	Ī	Rated speed rpm	: 275	
(B) SETTING OF INJECTION PUMP	, 1	natea opeca i piii	. 213	
WITH GOVERNOR	+	CRT mm min.	: > 8.00	
	+		. /25	
		Rated speed rpm	: 425	
FULL LOAD DELIVERY AT FULL LO	AD STOP			
	+	TORQUE CONTROL		
Rated speed rpm : 1000	+	8.4.4.	. 4000	
Aneroid pressure hPa : 1700	Ī	Rated speed rpm rack travel mm		
Del. quantity	Ţ	Tolerance mm	: +- 0.05	
cm3/1000 strokes : 278.5	+			
Tolerance	†	Rated speed rpm		
cm3/1000 strokes : +- 1.0 Check tolerance	†	rack travel mm Tolerance mm		
cm3/1000s. : +- 4.0	I	TO CET ATTLE TIME	0.10	
Spreed	 	Rated speed rpm	: 750	
Tolerance	+	rack travel mm	: 14.00	
cm3/1000 strokes : 5.0	†	Tolerance mm	: +- 0.10	
Check tolerance cm3/1000s. : 12.0	Ī			
(113) 10000.	4	ANEROID/ALTITUDE		
	+	COMPENSATOR TEST		
CONTROL LEVER				
CONTROL LEVER	I	SETTING		
control lever	1	· - · · · · · · ·		
position degree : 121.0	+	Rated speed rpm		
tolerance degree : +- 6.0	†	Pressure hPa		
RATED SPEED	Ī	rack travel mm Tolerance mm	: 14.65 : +- 0.05	
NATED SELED	Į	TO COT ALTOC TIME	0.05	
rack travel mm : 13.50	+	MEASUREMENT		
Rated speed rpm : 1065	†	D		
Tolerance 1/min : +- 15	<u>†</u>	Pressure hPa Rated speed rpm	1000	
rack travel mm : 4.00	I	rack travel mm	: 10.55	
Rated speed rpm : 1175	+	Tolerance mm	: ← 0.20	

Rated speed rpm	: 1000
Pressure hPa rack travel mm Tolerance mm	: 1130 : 13.50 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 420 : 11.55 : + 0.05
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 280
Check speed 1/min Check	: > 80
speed 1/min	: < 290
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: + 3.0 : + 6.0 : 8.0 : 12.0
Rated speed rpm Del. quantity	: 650
cm3/1000 strokes Tolerance	: 135.5
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s.	: +- 4.0
BREAKAWAY	and the second second second second second second second second second second second second second second seco
Rack travel in mm Rated speed rpm Tolerance 1/min	: 13.50 : 1065 : + 15

STARTING FUEL DELIVERY

Rated speed rpm	:	100
rack travel mm	:	10.70
Tolerance mm	: +	0.50
Del. quantity		
cm3/1000 strokes	:	168.0
Tolerance		
cm3/1000 strokes	: +-	20.0
Check tolerance		
cm3/1000s.	: +-	25.0

LOW IDLE

Rated speed rpm Del. quantity	: 350	
cm3/1000 strokes	: 24.0	
cm3/1000 strokes	: ← 3.0	
Check tolerance cm3/1000S. Spreed	: +- 5.0	
Tolerance cm3/1000 strokes	: 5.0	
Check tolerance cm3/1000s.	: 9.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.07.96 Test oil : ISO 4113

Combination No. : 0 402 746 644

Injection pump

Pump designation : PES6P12OA32OLS7362

EP type number : 0 412 726 929

Governor

Governer design. : RQV350...1100PA1202K

Governer no. : 0 421 815 457

Cust. part No. : 1824682091

Customer—spec. information
Customer : NAVISTAR
Motor : DTA-530

Power KW : 245.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.8
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.90 Tolerance mm : +- 0.05

Check

tolerance mm : +- 1.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.30

olerance : +- 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 14.65 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 278.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

L22

	Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : 12.0	rack travel mm : 0.50 Tolerance mm : +- 0.50
Rated speed rpm : 350	Rated speed rpm : 1350
Rack travel in mm : 5.90 Tolerance mm : + 0.10 Del. quantity	LOW IDLE
<pre>cm3/1000 strokes : 24.5 Tolerance cm3/1000 strokes : + 3.0</pre>	control lever position degree : 78.0
Check tolerance + 5.0 + 5.0	tolerance degree : +- 6.0
Spreed + Tolerance + cm3/1000 strokes : 5.0 +	Testing: Rated speed rpm : 350
Check tolerance cm3/1000s. : 9.0	rack travel mm : 5.90 Tolerance mm : +- 0.10
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 275
WITH GOVERNOR	CRT mm min. :> 8.00
	Rated speed rpm : 425
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 1000 Aneroid pressure hPa : 1800 Del. quantity	Rated speed rpm : 1000 rack travel mm : 14.65 Tolerance mm : +- 0.05
cm3/1000 strokes : 278.5 Tolerance + cm3/1000 strokes : + 1.0 Check tolerance +	Rated speed rpm : 650 rack travel mm : 12.80 Tolerance mm : +- 0.20
cm3/1000S. : +- 4.0 + 5.0 + 5.0 + 5.0	Rated speed rpm : 1100 rack travel mm : 14.15 Tolerance mm : +- 0.10
Check tolerance cm3/1000s. : 12.0	Rated speed rpm : 750 rack travel mm : 13.20 Tolerance mm : +- 0.20
CONTROL LEVER	ANEROID/ALTITUDE
control lever position degree : 118.0 tolerance degree : +- 6.0	COMPENSATOR TEST
RATED SPEED	SETTING
rack travel mm : 13.05 Rated speed rpm : 1160 Tolerance 1/min : +- 15	Rated speed rpm : 1000 Pressure hPa : 1800 rack travel mm : 14.65 Tolerance mm : +- 0.05
rack travel mm : 4.00 + Rated speed rpm : 1290 +	MEASUREMENT

Pressure hPa	: -
Rated speed rpm	: 1000
rack travel mm	: 10.60
Tolerance mm	: +- 0.20
Rated speed rpm	: 1000
Pressure hPa	: 1220
rack travel mm	: 14.00
Tolerance mm	: ← 0.20
Pressure hPa	: 440
rack travel mm	: 11.85
Tolerance mm	: +- 0.05
START CUT-OUT	
Rated speed rpm	: > 100
Rated speed rpm	: < 280
Check	
speed 1/min	: > 80
Check	
speed 1/min	: < 290
FUEL DELIVERY CHA	RACTERISTICS
August de management	
Aneroid pressure hPa	: 1800
Rated speed rpm	
	. 750
Del. quantity	. 2/0.0
cm3/1000 strokes	: 249.0
Tolerance	
cm3/1000 strokes	: +- 3.0
Check tolerance	
cm3/1000s.	: +- 6.0
	: +- 6.0
cm3/1000s. Spreed Tolerance	: +- 6.0
cm3/1000s. Spreed Tolerance	: +- 6.0 : 8.0
cm3/1000s. Spreed	
cm3/1000s. Spreed Tolerance cm3/1000 strokes	
cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 8.0
cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure	: 8.0 : 12.0
cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: 8.0 : 12.0 : -
cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 8.0 : 12.0
cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: 8.0 : 12.0 : - : 1000
cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 8.0 : 12.0 : -
cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 8.0 : 12.0 : - : 1000 : 155.5
cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 8.0 : 12.0 : - : 1000
cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 8.0 : 12.0 : - : 1000 : 155.5 : + 2.0
cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 8.0 : 12.0 : - : 1000 : 155.5
cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 8.0 : 12.0 : - : 1000 : 155.5 : + 2.0
cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 8.0 : 12.0 : - : 1000 : 155.5 : + 2.0

Tolerance 1/min : +- 15 STARTING FUEL DELIVERY 100 Rated speed rpm : rack travel mm : 10.80 : +- 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 168.0 Tolerance cm3/1000 strokes : +- 20.0Check tolerance cm3/1000s. : +- 25.0 LOW IDLE Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 24.5 Tolerance cm3/1000 strokes : +- 3.0Check tolerance cm3/1000s. 5.0 Spreed Tolerance 5.0 cm3/1000 strokes : Check tolerance cm3/1000s. 9.0

End of test specification sheet

Rack travel in mm :

Rated speed rpm :

13.05

1160

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23.07.96 : ISO 4113

Combination No. : 0 402 746 969

Injection pump

Pump designation : PES6P120A720RS7321

EP type number : 0 412 726 906

Governor

Governer design. : RQV325...875PA944

: -17K

Governer no.

: 0 421 815 391

Cust. part No. : 313GC5212-P2

Customer-spec. information

Customer

: MACK

Motor

: EM7-250

Power KW

: 187.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 084

Inlet press. bar :

2.8

Tolerance bar : +- 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

: 208.5

Tolerance bar

: +- 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 17.0

Tolerance bar : + 1.0

3.30 Prestroke mm

: +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm : 12.00

Tolerance mm : +- 1.00

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300

: **←** 0.30 Tolerance

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 875

Rack travel in mm: 12.45

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 269.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: +- 4.0

Spreed

Tolerance	+
cm3/1000 strokes : 5.0	+ control lever
Charle to Language	position degree : 65.0
Check tolerance cm3/1000s. : 9.0	tolerance degree : +- 4.0
cm3/1000s. : 9.0	Testing:
	T resume.
Rack travel in mm : 4.70	Rated speed rpm : 340
Tolerance mm : + 0.10	rack travel mm : 4.70
	rack travel mm : 4.70 Tolerance mm : +- 0.10
	+
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 275
WITH GOVERNOR	1 007
	+ CRT mm min. : > 6.00
	Rated speed rpm : 425
FULL LOAD DELIVERY AT FULL LOAD STOP	T Rated speed I pill : 423
TOLE LOAD DELIVERY AT TOLE LOAD STOT	
Rated speed rpm : 875	TORQUE CONTROL
Aneroid pressure	+
hPa : 1200	Rated speed rpm : 875
Del. quantity	rack travel mm : 12.45 Tolerance mm : +- 0.05
cm3/1000 strokes : 269.5	+ Tolerance mm ; +- 0.05
Tolerance cm3/1000 strokes : +- 1.0	Pated speed non . 510
Check tolerance	Rated speed rpm : 510 rack travel mm : 13.20
cm3/1000s. : +- 4.0	+ Tolerance mm : + 0.10
Spreed	The second secon
Tolerance	Rated speed rpm : 400
cm3/1000 strokes : 5.0	+ rack travel mm : 12.20
Check tolerance	+ Tolerance mm : + 0.20
cm3/1000s. : 9.0	+
	ANEDOTO / AL TYTUDE
	+ ANEROID/ALTITUDE + COMPENSATOR TEST
CONTROL LEVER	T COM ENGATOR 1231
CONTROL LEVER	1
control lever	+ SETTING
position degree : 118.0	+
tolerance degree : +- 4.0	+ Rated speed rpm : 510
	Rated speed rpm : 510 Pressure hPa : 1200 rack travel mm : 13.20
RATED SPEED	Pressure hPa : 1200 rack travel mm : 13.20 Tolerance mm : +- 0.10
rack travel mm : 11.40	+ Tolerance mm : +- 0.10
rack travel mm : 11.40 Rated speed rpm : 920	T MEASUREMENT
Tolerance 1/min : +- 5	TIEAGONETIEW
	Pressure hPa : -
rack travel mm : 4.00	+ Rated speed rpm : 510
Rated speed rpm : 1050	rack travel mm : 8.70
Tolerance 1/min : + 15	Tolerance mm : +- 0.20
0.50	† 540
rack travel mm : 0.50	Rated speed rpm : 510
Tolerance mm : +- 0.50 Rated speed rpm : 1200	Pressure hPa : 570
nated Speed (bill . 1500	rack travel mm : 12.30
	+ Tolerance mm : +- 0.20
	+
LOW IDLE	Pressure hPa : 285
	+ rac travel mm : 9.95
	+ Tole. ince mm : +- 0.05

START CUT-OUT			
Rated speed rpm Rated speed rpm	: > : <	100 250	
Check speed 1/min Check speed 1/min	: >	80 255	
FUEL DELIVERY CHA	ARACTER	ISTICS	

Aneroid pressure			
hPa	:	•	1200
Rated speed rpm	:		510
Del. quantity			
cm3/1000 strokes	;		345.0
Tolerance			
cm3/1000 strokes	:	+-	3.0
Check tolerance			
cm3/1000s.	:	+-	6.0
Spreed			
Tolerance			
cm3/1000 strokes	:		8.0
Check tolerance			
cm3/1000s.	:		12.0

Aneroid pressure		
hPa	:	-
Rated speed rpm	:	400
Del. quantity		
cm3/1000 strokes	:	183.0
Tolerance		
cm3/1000 strokes	: +-	- 2.0
Check tolerance		
cm3/1000s.	: +-	- 4.0

BREAKAWAY

Rack travel in mm : 11.40
Rated speed rpm : 920
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 21.00
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 190.0
Tolerance
cm3/1000 strokes : + 20.0

Check tolerance cm3/1000s. : +- 30.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 23.07.96 Edition Test oil : ISO 4113

Combination No. : 0 402 746 974

Injection pump

Pump designation : PES6P120A720RS7323

EP type number : 0 412 726 907

Governor

Governer design. : RQV325...900PA909

: -6K

: 0 421 815 396 Governer no.

Cust. part No. : 313GC5213-P2

Custome -spec. information Customer : MACK Motor : EN7350 Power KW : 261.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temc. °C : +- 2.0 Tolerance °C

Overflow valve : 2 417 413 084

Inlet press. bar : 2.8
Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 600

x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.80 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

: +- 0.75 tolerance "NW

Start of delivery blocking

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm: 14.15

Toterance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 234.5

Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 1200
Check tolerance cm3/1000s. : +- 4.0	LOW IDLE
Spreed Tolerance cm3/1000 strokes : 5.0	<pre>control lever position degree : 62.0 tolerance degree : + 6.0</pre>
Check tolerance cm3/1000s. : 9.0	Testing:
Rack travel in mm: 5.20 Tolerance mm: + 0.10	Rated speed rpm : 325 rack travel mm : 5.20 Tolerance mm : + 0.10
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 275
WITH GOVERNOR	CRT mm min. : > 6.30
	Rated speed rpm : 425
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 900 Aneroid pressure hPa : 1200 Del. quantity	Rated speed rpm : 900 rack travel mm : 14.15 Tolerance mm : + 0.05
<pre>cm3/1000 strokes : 234.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0</pre>	Rated speed rpm : 625 rack travel mm : 14.00 Tolerance mm : +- 0.10
Spreed + Tolerance + cm3/1000 strokes : 5.0 +	Rated speed rpm : 500 rack travel mm : 12.70 Tolerance mm : +- 0.20
Check tolerance cm3/1000s. : 9.0	ANEROID/ALTITUDE COMPENSATOR TEST
CONTROL LEVER	
control lever	SETTING
position degree : 113.0 + tolerance degree : +- 6.0 + RATED SPEED	Rated speed rpm : 900 Pressure hPa : 1200 rack travel mm : 14.15 Tolerance mm : +- 0.05
rack travel mm : 13.15	MEASUREMENT
Rated speed rpm : 945 Tolerance 1/min : +- 5	Pressure hPa : - Rated speed rpm : 900
rack travel mm : 4.00 Rated speed rpm : 1120 Tolerance 1/min : +- 15	rack travel mm : 8.40 Tolerance mm : +- 0.20
rack travel mm : 0.50	Rated speed rpm : 900
Tolerance mm : +- 0.50	Pressure hPa : 820

rack travel mm : 13.20 Tolerance mm : +- 0.20 Pressure hPa : 380 rack travel mm : 9.85 Tolerance mm : +- 0.05 START CUT-OUT Rated speed rpm : > 100 Rated speed rpm : < 275 Check speed 1/min : > 80
Tolerance mm : + 0.20 Pressure hPa : 380 rack travel mm : 9.85 Tolerance mm : + 0.05 START CUT-OUT Rated speed rpm : > 100 Rated speed rpm : < 275 Check speed 1/min : > 80
rack travel mm : 9.85 Tolerance mm : + 0.05 START CUT-OUT Rated speed rpm : > 100 Rated speed rpm : < 275 Check speed 1/min : > 80
rack travel mm : 9.85 Tolerance mm : + 0.05 START CUT-OUT Rated speed rpm : > 100 Rated speed rpm : < 275 Check speed 1/min : > 80
Tolerance mm : + 0.05 START CUT-OUT Rated speed rpm : > 100 Rated speed rpm : < 275 Check speed 1/min : > 80
START CUT-OUT Rated speed rpm : > 100 Rated speed rpm : < 275 Check speed 1/min : > 80
Rated speed rpm : > 100 Rated speed rpm : < 275 Check speed 1/min : > 80
Rated speed rpm : > 100 Rated speed rpm : < 275 Check speed 1/min : > 80
Rated speed rpm : < 275 Check speed 1/min : > 80
Rated speed rpm : < 275 Check speed 1/min : > 80
speed 1/min :> 80
speed 1/min :> 80
Check
speed 1/min : < 285
FUEL DELIVERY CHARACTERISTICS
LOST DELIVER! CHARACTERISTICS
Aneroid pressure
hPa : 1200
Rated speed rpm : 625
Del. quantity
cm3/1000 strokes : 269.0
Tolerance cm3/1000 strokes : +- 3.0
Check tolerance
cm3/1000s. : +- 6.0
Spreed
Tolerance
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000s. : 12.0
Aneroid pressure
hPa : -
Rated speed rpm : 400
Del. quantity
cm3/1000 strokes : 155.5
Tolerance cm3/1000 strokes : +- 2.0
Check tolerance
cm3/1000s. : +- 4.0
BREAKAWAY
_ , , , , , , , , , , , , , , , , , , ,
Rack travel in mm : 13.15
Rated speed rpm : 945
Rated speed rpm : 945
Rated speed rpm : 945 Tolerance 1/min : +- 5
Rated speed rpm : 945
Rated speed rpm : 945 Tolerance 1/min : +- 5

Tolerance mm : + 1.00
Del. quantity
cm3/1000 strokes : 200.0
Tolerance
cm3/1000 strokes : +- 20.0
Check tolerance
cm3/1000S. : +- 25.0

End of test specification sheet

MO2

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 23.07.96 : ISO 4113

Test oil

Combination No. : 0 402 746 975

Injection pump

Pump designation : PES6P120A720RS7323

EP type number : 0 412 726 907

Governor

Governer design. : RQV325...900PA909

: -7K

Governer no.

: 0 421 815 397

Cust. part No. : 313GC5213-P4

Customer-spec. information : MACK Customer : EN7400 Motor : 298.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 084

Inlet press. bar : Tolerance bar : + 0.1

2.8

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar

: +- 1.5

Test lines

: 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Tolerance bar : +- 1.0

Prestroke mm 2.80

: +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50

Tolerance mm : +- 1.00

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.75

BASIC SETTING

900 Rated speed rpm :

Rack travel in mm : 16.00

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes :

277.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: +- 4.0

Spreed

MO3

Tolerance cm3/1000 strokes : 5.0	+ rack travel mm : 4.00 + Rated speed rpm : 1133 + Tolerance 1/min : + 15
Check tolerance cm3/1000s. : 9.0	+ rack travel mm : 0.50 + Tolerance mm : +- 0.50
Rated speed rpm : 325	Rated speed rpm : 1200
Rack travel in mm : 5.20	
Tolerance mm : +- 0.10 Del. quantity	+ LOW IDLE
cm3/1000 strokes : 44.0 Tolerance	+ control lever
cm3/1000 strokes : +- 3.0	position degree : 64.0
Check tolerance cm3/1000s. : +- 5.0	+ tolerance degree : +- 6.Ū
Spreed	Testing:
Tolerance cm3/1000 strokes : 8.0	Rated speed rpm : 325
Check tolerance cm3/1000s. : 12.0	rack travel mm : 5.20 Tolerance mm : +- 0.10
	+
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 275
WITH GOVERNOR	+ CRT mm min. :> 6.70
	Rated speed rpm : 425
	1
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 900	TORQUE CONTROL
Rated speed rpm : 900 Aneroid pressure	TORQUE CONTROL Rated speed rpm : 900 rack travel mm : 16.00
Rated speed rpm : 900 Aneroid pressure hPa : 1500 Del. quantity	Rated speed rpm : 900
Rated speed rpm : 900 Aneroid pressure hPa : 1500	Rated speed rpm : 900 rack travel mm : 16.00 Tolerance mm : + 0.05 Rated speed rpm : 625
Rated speed rpm : 900 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.5 Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 900 rack travel mm : 16.00 Tolerance mm : + 0.05 Rated speed rpm : 625 rack travel mm : 15.60
Rated speed rpm : 900 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	Rated speed rpm : 900 rack travel mm : 16.00 Tolerance mm : +- 0.05 Rated speed rpm : 625 rack travel mm : 15.60 Tolerance mm : +- 0.10
Rated speed rpm : 900 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed	Rated speed rpm : 900 rack travel mm : 16.00 Tolerance mm : + 0.05 Rated speed rpm : 625 rack travel mm : 15.60
Rated speed rpm : 900 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 900 rack travel mm : 16.00 Tolerance mm : +- 0.05 Rated speed rpm : 625 rack travel mm : 15.60 Tolerance mm : +- 0.10 Rated speed rpm : 500
Rated speed rpm : 900 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance	Rated speed rpm : 900 rack travel mm : 16.00 Tolerance mm : + 0.05 Rated speed rpm : 625 rack travel mm : 15.60 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 13.90 Tolerance mm : + 0.20
Rated speed rpm : 900 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	Rated speed rpm : 900 rack travel mm : 16.00 Tolerance mm : + 0.05 Rated speed rpm : 625 rack travel mm : 15.60 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 13.90
Rated speed rpm : 900 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance	Rated speed rpm : 900 rack travel mm : 16.00 Tolerance mm : +- 0.05 Rated speed rpm : 625 rack travel mm : 15.60 Tolerance mm : +- 0.10 Rated speed rpm : 500 rack travel mm : 13.90 Tolerance mm : +- 0.20 ANEROID/ALTITUDE COMPENSATOR TEST
Rated speed rpm : 900 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER control lever	Rated speed rpm : 900 rack travel mm : 16.00 Tolerance mm : +- 0.05 Rated speed rpm : 625 rack travel mm : 15.60 Tolerance mm : +- 0.10 Rated speed rpm : 500 rack travel mm : 13.90 Tolerance mm : +- 0.20 ANEROID/ALTITUDE COMPENSATOR TEST SETTING
Rated speed rpm : 900 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0	Rated speed rpm : 900 rack travel mm : 16.00 Tolerance mm : +- 0.05 Rated speed rpm : 625 rack travel mm : 15.60 Tolerance mm : +- 0.10 Rated speed rpm : 500 rack travel mm : 13.90 Tolerance mm : +- 0.20 ANEROID/ALTITUDE COMPENSATOR TEST
Rated speed rpm : 900 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER control lever position degree : 117.0	Rated speed rpm : 900 rack travel mm : 16.00 Tolerance mm : +- 0.05 Rated speed rpm : 625 rack travel mm : 15.60 Tolerance mm : +- 0.10 Rated speed rpm : 500 rack travel mm : 13.90 Tolerance mm : +- 0.20 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 900
Rated speed rpm : 900 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER control lever position degree : 117.0 tolerance degree : +- 6.0 RATED SPEED	Rated speed rpm : 900 rack travel mm : 16.00 Tolerance mm : + 0.05 Rated speed rpm : 625 rack travel mm : 15.60 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 13.90 Tolerance mm : + 0.20 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 900 Pressure hPa : 1500 MEASUREMENT Pressure hPa : -
Rated speed rpm : 900 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.5 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 117.0 tolerance degree : +- 6.0 RATED SPEED	Rated speed rpm : 900 rack travel mm : 16.00 Tolerance mm : + 0.05 Rated speed rpm : 625 rack travel mm : 15.60 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 13.90 Tolerance mm : + 0.20 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 900 Pressure hPa : 1500 MEASUREMENT

Rated speed rpm	: 900
Danasana kos	. 090
Pressure hPa	: 980
rack travel mm	: 14.40
Tolerance mm	: + 0.20
Pressure hPa	: 450
rack travel mm	: 10.35
Tolerance mm	: +- 0.05
START CUT-OUT	
Rated speed rpm	: > 100
	: > 100 : < 275
Rated speed rpm	: < 213
Check	
speed 1/min	: > 80
Check	
speed 1/min	: < 285
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa	: 1500
Rated speed rpm	: 625
Del. quantity	
cm3/1000 strokes	: 307.0
Tolerance	
cm3/1000 strokes	: +- 3.0
Check tolerance	
cm3/1000s.	: +- 6.0
Spreed	
Tolerance	
cm3/1000 strokes	: 8.0
Check tolerance	. 0.0
cm3/1000s.	: 12.0
CIN37 10003.	. 12.0
Aneroid pressure	
hPa	: -
Rated speed rpm	: 400
Del. quantity	
cm3/1000 strokes	: 159.0
Tolerance	
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s.	: +- 4.0
BREAKAWAY	
	45.00
Rack travel in mm	
Rated speed rpm	: 945 _
Tolerance 1/min	: +- 5

STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity	: 100 : 11.20 : +- 1.00
cm3/1000 strokes	: 215.0
cm3/1000 strokes Check tolerance	: +- 20.0
cm3/1000s.	: +- 25.0

LOW IDLE	
Rated speed rpm Del. quantity	: 325
cm3/1000 strokes Tolerance	: 44.0
cm3/1000 strokes Check tolerance	: +- 3.0
cm3/1000s. Spreed	: +- 5.0
Tolerance	0.0
cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 23.07.96 Edition Test oil : ISO 4113

Combination No. : 0 402 746 977

Injection pump

Pump designation : PES6P120A720RS7323 EP type number : 0 412 726 907

Governor

Governer design. : RQV325...975PA909

: -9K

: 0 421 815 399 Governer no.

Cust. part No. : 313GC5213-P10

Customer-spec. information Customer : MACK : EN7300A Motor Power KW : 223.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : +- 2.0 Tolerance *C

Overflow valve : 2 417 413 084

Inlet press. bar : 2.8 Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar : +- 1.5 Tolerance bar

Test lines : 1 680 750 008

Outside diameter : 6.0

2.0 x inside diameter : x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

17.0 Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 2.80 : +- 0.05 Tolerance mm

Check

: + 0.10tolerance mm

Rack travel in mm: 10.50 : +- 1.00 Tolerance mm

: 1-5- 3- 6- 2-Firing order

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.75

BASIC SETTING

975 Rated speed rpm :

Rack travel in mm: 12.55 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 202.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance	+
cm3/1000 strokes : 5.0	+ control lever
Check tolerance	<pre>position degree : 65.0 tolerance degree : +- 6.0</pre>
cm3/1000s. : 9.0	T toter ance degree . • 0.0
. , , , , , , , , , , , , , , , , , , ,	† Testing:
	+
Rack travel in mm : 5.30	Rated speed rpm : 325
Tolerance mm : +- 0.10	rack travel mm : 5.30 Tolerance mm : + 0.10
	Toterance mm : + 0.10
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 275
WITH GOVERNOR	+
	+ CRT min min. :> 6.30
	700
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Rated speed rpm : 400
FULL EUAD DELIVERY AT FULL LOAD STOP	I
Rated speed rpm : 975	TORQUE CONTROL
Aneroid pressure	+
hPa : 1200	Rated speed rpm : 975
Del. quantity	rack travel mm : 12.55 Tolerance mm : +- 0.05
cm3/1000 strokes : 202.0 Tolerance	Toterance man : += 0.05
cm3/1000 strokes : +- 1.0	Rated speed rpm : 600
Check tolerance	rack travel mm : 12.00
cm3/1000s. : +- 4.0	+ Tolerance mm : +- 0.10
Spreed	D to the second secon
Tolerance cm3/1000 strokes : 5.0	+ Rated speed rpm : 500 + rack travel mm : 11.50
Check tolerance	Tolerance mm : +- 0.20
cm3/1000s. : 9.0	+
	+
	ANEROID/ALTITUDE
CONTROL I EVER	ANEROID/ALTITUDE COMPENSATOR TEST
CONTROL LEVER	
control lever position degree : 112.5	COMPENSATOR TEST SETTING
control lever	COMPENSATOR TEST SETTING Rated speed rpm : 975
control lever position degree : 112.5 tolerance degree : +- 6.0	COMPENSATOR TEST SETTING Rated speed rpm : 975 Pressure hPa : 1200
control lever position degree : 112.5	COMPENSATOR TEST SETTING Rated speed rpm : 975 Pressure hPa : 1200 rack travel mm : 12.55
control lever position degree : 112.5 tolerance degree : +- 6.0 RATED SPEED	COMPENSATOR TEST SETTING Rated speed rpm : 975 Pressure hPa : 1200
control lever position degree : 112.5 tolerance degree : +- 6.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1020	COMPENSATOR TEST SETTING Rated speed rpm : 975 Pressure hPa : 1200 rack travel mm : 12.55
control lever position degree : 112.5 tolerance degree : +- 6.0 RATED SPEED rack travel mm : 11.60	COMPENSATOR TEST SETTING Rated speed rpm : 975 Pressure hPa : 1200 rack travel mm : 12.55 Tolerance mm : +- 0.05 MEASUREMENT
control lever position degree : 112.5 tolerance degree : +- 6.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1020 Tolerance 1/min : +- 5	COMPENSATOR TEST SETTING Rated speed rpm : 975 Pressure hPa : 1200 rack travel mm : 12.55 Tolerance mm : +- 0.05 MEASUREMENT Pressure hPa : -
control lever position degree : 112.5 tolerance degree : + 6.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1020 Tolerance 1/min : + 5 rack travel mm : 4.00	COMPENSATOR TEST SETTING Rated speed rpm : 975 Pressure hPa : 1200 rack travel mm : 12.55 Tolerance mm : +- 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 975
control lever position degree : 112.5 tolerance degree : +- 6.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1020 Tolerance 1/min : +- 5	COMPENSATOR TEST SETTING Rated speed rpm : 975 Pressure hPa : 1200 rack travel mm : 12.55 Tolerance mm : +- 0.05 MEASUREMENT Pressure hPa : -
control lever position degree : 112.5 tolerance degree : +- 6.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1020 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1165 Tolerance 1/min : +- 15	COMPENSATOR TEST SETTING Rated speed rpm : 975 Pressure hPa : 1200 rack travel mm : 12.55 Tolerance mm : +- 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 975 rack travel mm : 8.20 Tolerance mm : +- 0.20
control lever position degree : 112.5 tolerance degree : +- 6.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1020 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1165 Tolerance 1/min : +- 15 rack travel mm : 0.50	COMPENSATOR TEST SETTING Rated speed rpm : 975 Pressure hPa : 1200 rack travel mm : 12.55 Tolerance mm : +- 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 975 rack travel mm : 8.20
control lever position degree : 112.5 tolerance degree : +- 6.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1020 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1165 Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : 0.50 Tolerance mm : +- 0.50	COMPENSATOR TEST SETTING Rated speed rpm : 975 Pressure hPa : 1200 rack travel mm : 12.55 Tolerance mm : +- 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 975 rack travel mm : 8.20 Tolerance mm : +- 0.20 Rated speed rpm : 975
control lever position degree : 112.5 tolerance degree : +- 6.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1020 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1165 Tolerance 1/min : +- 15 rack travel mm : 0.50	COMPENSATOR TEST SETTING Rated speed rpm : 975 Pressure hPa : 1200 rack travel mm : 12.55 Tolerance mm : +- 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 975 rack travel mm : 8.20 Tolerance mm : +- 0.20 Rated speed rpm : 975 Pressure hPa : 975 Rated speed rpm : 975 Pressure hPa : 460
control lever position degree : 112.5 tolerance degree : +- 6.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1020 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1165 Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : 0.50 Tolerance mm : +- 0.50	COMPENSATOR TEST SETTING Rated speed rpm : 975 Pressure hPa : 1200 rack travel mm : 12.55 Tolerance mm : +- 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 975 rack travel mm : 8.20 Tolerance mm : +- 0.20 Rated speed rpm : 975
control lever position degree : 112.5 tolerance degree : + 6.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1020 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1165 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1250	COMPENSATOR TEST SETTING Rated speed rpm : 975 Pressure hPa : 1200 rack travel mm : 12.55 Tolerance mm : +- 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 975 rack travel mm : 8.20 Tolerance mm : +- 0.20 Rated speed rpm : 975 Pressure hPa : 460 rack travel mm : 11.30 Tolerance mm : +- 0.20
control lever position degree : 112.5 tolerance degree : +- 6.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1020 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1165 Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : 0.50 Tolerance mm : +- 0.50	COMPENSATOR TEST SETTING Rated speed rpm : 975 Pressure hPa : 1200 rack travel mm : 12.55 Tolerance mm : +- 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 975 rack travel mm : 8.20 Tolerance mm : +- 0.20 Rated speed rpm : 975 Pressure hPa : 460 rack travel mm : 11.30 Tolerance mm : +- 0.20 Pressure hPa : 235
control lever position degree : 112.5 tolerance degree : + 6.0 RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1020 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1165 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1250	COMPENSATOR TEST SETTING Rated speed rpm : 975 Pressure hPa : 1200 rack travel mm : 12.55 Tolerance mm : +- 0.05 MEASUREMENT Pressure hPa : - Rated speed rpm : 975 rack travel mm : 8.20 Tolerance mm : +- 0.20 Rated speed rpm : 975 Pressure hPa : 460 rack travel mm : 11.30 Tolerance mm : +- 0.20

START CUT-OUT	
Rated speed rpm	; > 100
Rated speed rpm Rated speed rpm	: < 275
Check	
speed 1/min	: > 80
Check speed 1/min	: < 285
Speed Milli	. \ 203
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa	: 1200
Rated speed rpm	: 600
Del. quantity	
cm3/1000 strokes	: 223.5
Tolerance	
cm3/1000 strokes	: +- 3.0
Check tolerance cm3/1000s.	: +- 6.0
Spreed	0.0
Tolerance	
cm3/1000 strokes	: 8.0
Check tolerance	
cm3/1000s.	: 12.0
Aneroid pressure	
hPa	: -
Rated speed rpm	: 400
Del. quantity	440.5
cm3/1000 strokes	: 148.0
Tolerance	
cm3/1000 strokes	: + 2.0
Check tolerance cm3/1000s.	: +- 4.0
	· · · · · · · · · · · · · · · · · · ·
BREAKAWAY	
D 1 4 - 1 *	. 44 (0
Rack travel in mm Rated speed rpm	
Tolerance 1/min	: +- 5
TO CET GITTE THINH	•
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
rack travel mm	: 10.80
Tolerance mm	: +- 1.00
Del. quantity	205.0
cm3/1000 strokes	: 205.0
Tolerance cm3/1000 strokes	: +- 20.0
CIIID/ IUUU STrokes	20.0

Check tolerance cm3/1000s. : +- 30.0

BOSCH INJ. PUMP TEST SPECIFICATIONS Note remarks Refer to Service Info for test and adjustment instructions. See microcard(s) W400/... : 23.07.96 Edition : ISO 4113 Test oil Combination No. : 0 402 746 987 Injection pump Pump designation : PES6P120A320LS7322 EP type number : 0 412 726 904 Governor Governer design. : RQV350...1150PA1139K : 0 421 815 408 Governer no. Cust. part No. : 1823137091 Customer-spec. information : NAVISTAR Customer : DTA-466 Motor : 187.0 Power KW TEST BENCH REQUIREMENTS Inlet line : 4.2 Test oil inlet temp. °C : +- 2.0 Tolerance °C Overflow valve : 2 417 413 076 Inlet press. bar : 2.8 Tolerance bar : +- 0.1 Test nozzle holde : 1 688 901 101 assembly Opening pressure 208.5 bar Tolerance bar : + 1.5

: 1 680 750 008

x length m	n	:	6	00			
REMARKS		-					
(A) INJECTI Set equal oper values	delivery	/ C			VALU	ES	
BEGINNING (OF DELIV	ÆR	Y				
Test pressu Tolerance	ıre bar bar	:	+	17. 1.	.0		
Prestroke m Tolerance m Check		:	+	2.9	20 35		
tolerance m	n/n	:	+	0.1	0		
Rack travel Tolerance m				11.5			
Firing orde	er		1- 4	5-	3-	6-	2-
Phasing			-30	0	20-1	802	40
Tolerance Check		:	+-	0.3	50		
tolerance ⁴	'NW	:	+-	0.7	'5		
BASIC SETTI	NG						
Rated speed	l rpm	:	1	150			
Rack travel Tolerance m		:	+-	13.C 0.C			
Del. quanti cm3/1000 st	ty rokes	:		181.	5		
Tolerance cm3/1000 st	rokes	:	+-	1.	0		
Check toler cm3/1000s.	ance	:	+	4.	0		
Spreed							

x inside diameter :

2.0

M09

Test lines

Outside diameter : 6.0

Tolerance cm3/1000 strokes : 8.0	+ rack travel mm : 4.00 + Rated speed rpm : 1360 + Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : 12.0	+ rack travel mm : 0.50 + Tolerance mm : +- 0.50
Rated speed rpm : 325	Rated speed rpm : 1450
Rack travel in mm : 6.15 Tolerance mm : + 0.10 Del. quantity	LOW IDLE
cm3/1000 strokes : 26.5 Tolerance	control lever
cm3/1000 strokes : + 3.0 Check tolerance	position degree : 73.0 tolerance degree : +- 6.0
cm3/1000s. : +- 5.0 Spreed Tolerance	Testing:
cm3/1000 strokes : 5.0 Check tolerance	Rated speed rpm : 325 rack travel mm : 6.15
cm3/1000s. : 9.0	Tolerance mm : + 0.10
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ Rated speed rpm : 275 + CRT mm min. :> 7.00
	Rated speed rpm : 400
FULL LOAD DELIVERY AT FULL LOAD STOP	TORQUE CONTROL
Rated speed rpm : 1150 Aneroid pressure	Rated speed rpm : 1150
hPa : 1200 Del. quantity	rack travel mm : 13.05 Tolerance mm : +- 0.05
cm3/1000 strokes : 181.5 Tolerance cm3/1000 strokes : +- 1.0	Rated speed rpm : 750 rack travel mm : 12.00
Check tolerance cm3/1000s. : +- 4.0	Tolerance mm : +- 0.10
Spreed Tolerance	Rated speed rpm : 1000 rack travel mm : 13.00
cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0	Tolerance mm : +- 0.10
	ANEROID/ALTITUDE COMPENSATOR TEST
CONTROL LEVER	T - SETTING
control lever position degree : 120.0 tolerance degree : +- 6.0	Rated speed rpm : 1150 Pressure hPa : 1200
RATED SPEED	rack travel mm : 13.05 Tolerance mm : +- 0.05
rack travel mm : 12.00 - Rated speed rpm : 1220 -	MEASUREMENT
Tolerance 1/min : + 15	Pressure hPa : - Rated speed rpm : 1150

rack travel mm Tolerance mm	: 9.00 : +- 0.20	
Rated speed rpm	: 1150	
Pressure hPa rack travel mm Tolerance mm	: 815 : 12.00 : + 0.20	
Pressure hPa rack travel mm Tolerance mm	: 360 : 10.00 : +- 0.05	
START CUT-OUT		
Rated speed rpm Rated speed rpm	: > 100 : < 280	
Check speed 1/min Check	: > 80	
	: < 290	
speed 1/min	. \ 2/0	
FUEL DELIVERY CHA		—
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm	RACTERISTICS: 1200	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1200 : 750	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1200 : 750 : 177.0	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 1200 : 750 : 177.0	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1200 : 750 : 177.0 : +- 3.0	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 1200 : 750 : 177.0 : + 3.0 : + 6.0	
FUEL DELIVERY CHARA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: 1200 : 750 : 177.0 : + 3.0 : + 6.0 : 8.0 : 12.0	
FUEL DELIVERY CHARA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure	: 1200 : 750 : 177.0 : + 3.0 : + 6.0 : 8.0	

BREAKAWAY

Rack travel in mm : 12.00
Rated speed rpm : 1220
Tolerance 1/min : + 15

cm3/1000 strokes : +-

Check tolerance cm3/1000s.

2.0

4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 21.00
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 130.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 30.0

LOW IDLE

Rated speed rpm : 325
Del. quantity
cm3/1000 strokes : 26.5
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 5.0
Spreed
Tolerance
cm3/1000 strokes : 5.0
Check tolerance
cm3/1000 strokes : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 28.03.96 : ISO 4113

Combination No. : 0 402 748 808

Injection pump

Pump designation : PES8P120A920/4LS7316

EP type number : 0 412 728 808

Governor

Governer design. : RQV325...1250PA1116K

Governer no.

: 0 421 815 379

Cust, part No. : 313 GC 5210

Customer-spec. information : MACK Customer : EN9 700 Motor Power KW : 522.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °S 2.0

Overflow valve : 2 417 413 011

Inlet press. bar : 2.5 Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm 3.60 : **←** 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

: 1-2-7-8-4 Firing order : - 5- 6- 3

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.75

Start of delivery blocking

: +- 0.50Tolerance

Check

: +- 0.75 tolerance *NW

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 12.55 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 250.5

Tolerance cm3/1000 strokes	: +- 1.0	+ Tolerance mm : +- 0.25 +
Check tolerance		Rated speed rpm : 470 guide sleeve
cm3/1000s.	: +- 4.0	travel mm : 3.55
CHD7 10003.	. , 4.0	Tolerance mm : +- 0.25
0		T roterance in : +- 0.23
Spreed		1500
Tolerance		+ Rated speed rpm : 1580
cm3/1000 strokes	: 6.0	🕂 guide sleeve
		🕂 travel mm : 13.50
Check tolerance		+ Tolerance mm : $+$ 0.50
cm3/1000s.	: 10.0	1
	, , , , , , , , , , , , , , , , , , , ,	
Rated speed rpm	: 350	GUIDE SLEEVE POSITION
Nated Speed (pin	. 550	1
		Rated speed rpm : 1430
	5 (0	Rated speed rpm : 1430
Rack travel in mo		†
Tolerance mm	: +- 0.20	Rack travel in mm : 11.50
Del. quantity		† Tolerance mm : +- 2.00
cm3/1000 strokes	: 51.5	+
Tolerance		<u> </u>
cm3/1000 strokes	: +- 3.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance		1
cm3/1000S.	: +- 6.0	Rated speed rpm : 1250
Spreed	0.0	+ Aneroid pressure
•		
Tolerance		
cm3/1000 strokes	: 8.0	+ Del. quantity
Check tolerance		+ cm3/1000 strokes : 250.5
cm3/1000s.	: 12.0	+ Tolerance
		+ cm3/1000 strokes : +- 1.0
		+ Check tolerance
(B) SETTING OF IN	NJECTION PUMP	+ cm3/1000s. : +- 4.0
WITH GOVERNOR		+ Spreed
		+ Tolerance
		+ cm3/1000 strokes : 6.0
GUIDE SLEEVE TRAV	iFI	+ Check tolerance
GOIDE GEEEVE TRAV		+ cm3/1000s. : 10.0
Rated speed rpm	: 325	1
	. 323	
guide sleeve	. 4 /7	Ţ
travel mm	: 1.67	CONTROL LEVED
Tolerance mm	: ← 0.25	+ CONTROL LEVER
	4700	†
Rated speed rpm	: 1300	+ control lever
guide sleeve		→ position degree : 63.0

travel mm	: 9.96	tolerance degree : +- 4.0
Tolerance mm	: 9.96 : +- 0.25	tolerance degree : +- 4.0
Tolerance mm		tolerance degree : +- 4.0
Tolerance mm Rated speed rpm	: +- 0.25	tolerance degree : +- 4.0 RATED SPEED
Tolerance mm Rated speed rpm guide sleeve	: ← 0.25 : 843	tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.50
Tolerance mm Rated speed rpm guide sleeve travel mm	: ← 0.25 : 843 : 6.02	tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.50 Rated speed rpm : 1300
Tolerance mm Rated speed rpm guide sleeve	: ← 0.25 : 843	tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.50
Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: ← 0.25 : 843 : 6.02 : ← 0.25	tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.50 Rated speed rpm : 1300 Tolerance 1/min : +- 5
Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	: ← 0.25 : 843 : 6.02	tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.50 Rated speed rpm : 1300 Tolerance 1/min : +- 5 rack travel mm : 4.00
Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: ← 0.25 : 843 : 6.02 : ← 0.25 : 360	tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.50 Rated speed rpm : 1300 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1405
Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: ← 0.25 : 843 : 6.02 : ← 0.25 : 360 : 2.30	tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.50 Rated speed rpm : 1300 Tolerance 1/min : +- 5 rack travel mm : 4.00
Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: ← 0.25 : 843 : 6.02 : ← 0.25 : 360	tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.50 Rated speed rpm : 1300 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1405 Tolerance 1/min : +- 15
Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: ← 0.25 : 843 : 6.02 : ← 0.25 : 360 : 2.30 : ← 0.25	tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.50 Rated speed rpm : 1300 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1405 Tolerance 1/min : +- 15 rack travel mm : 0.50
Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm	: ← 0.25 : 843 : 6.02 : ← 0.25 : 360 : 2.30	tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.50 Rated speed rpm : 1300 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1405 Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : +- 0.50
Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: ← 0.25 : 843 : 6.02 : ← 0.25 : 360 : 2.30 : ← 0.25 : 410	tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.50 Rated speed rpm : 1300 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1405 Tolerance 1/min : +- 15 rack travel mm : 0.50
Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm	: ← 0.25 : 843 : 6.02 : ← 0.25 : 360 : 2.30 : ← 0.25	tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.50 Rated speed rpm : 1300 Tolerance 1/min : +- 5 rack travel mm : 4.00 Rated speed rpm : 1405 Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : +- 0.50

		† Danson LDs	. 275		
LOW IDLE		Pressure hPa rack travel mm Tolerance mm	: 275 : 9.35 : + 0.05		
control lever position degree tolerance degree	: 17.0 : + 4.0	START CUT-OUT			
Testing:		Rated speed rpm Rated speed rpm			
Rated speed rpm rack travel mm	: 5.60	+ Check + speed 1/min	: > 80		
Tolerance mm	: ← 0.20	+ Check + speed 1/min	: < 300		
Rated speed rpm	: 300	<u> </u>			
CRT mm min.	: > 7.00	FUEL DELIVERY CHA	FUEL DELIVERY CHARACTERISTICS		
Rated speed rpm	: 400	Aneroid pressure hPa Rated speed rpm	: 1200 : 900		
TORQUE CONTROL		+ Del. quantity + cm3/1000 strokes			
Rated speed rpm rack travel mm Tolerance mm	: 1250 : 12.55 : + 0.05	+ Tolerance + cm3/1000 strokes + Check tolerance	: +- 3.0		
Rated speed rpm		+ cm3/1000s. + Spreed	: +- 6.0		
rack travel mm Tolerance mm	: 12.30	Tolerance cm3/1000 strokes	: 10.0		
Rated speed rpm rack travel mm		+ Check tolerance + cm3/1000s.	: 14.0		
Tolerance mm	: +- 0.20	Aneroid pressure hPa	: -		
ANEROID/ALTITUDE COMPENSATOR TEST		+ Rated speed rpm + Del. quantity + cm3/1000 strokes			
_		Tolerance cm3/1000 strokes	: +- 2.0		
SETTING	4250	+ Check tolerance + cm3/1000s.	: +- 4.0		
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1200 : 12.55	BREAKAWAY			
MEASUREMENT		Rack travel in mm Rated speed rpm			
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 1250 : 8.10 : + 0.20	Tolerance 1/min			
Rated speed rpm		STARTING FUEL DEL			
Pressure hPa rack travel mm Tolerance mm	: 550 : 11.50 : +- 0.20	Rated speed rpm rack travel mm Tolerance mm	: 11.40		

Del. quantity cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

cm3/1000s.

Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 51.5 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance

12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 23.07.96 Edition : ISO 4113 Test oil

Combination No. : 0 402 748 810

Injection pump

Pump designation : PES8P120A920/4LS7320

EP type number : 0 412 728 809

Governer design. : RQV325...950PA848

: -32K

: 0 421 815 389 Governer no.

Cust. part No. : 313GC5214P4

Customer-spec. information Customer : MACK : E9-450 Motor Power KW : 331.0

TEST BENCH REQUIREMENTS

Inlet line

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 086

2.8 Inlet press. bar : Tolerance bar

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 Tolerance bar 1.5

: 1 680 750 008 Test lines

Outside diameter : 6.0

2.0 x inside diameter : x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm 3.60 : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 : +- 1.50 Tolerance mm

: 1-2-7-8-4 Firing order

: - 5- 6- 3

: 0-45-90-135-180 Phasing

: -225-270-315 Tolerance : +- 0.30

Check

: +- 0.75 tolerance *NW

Start of delivery blocking

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

950 Rated speed rpm :

Rack travel in mm : 13.85 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 215.5

Tolerance cm3/1000 strokes : +- 1.0	rack travel mm : 4.00 Rated speed rpm : 1135
Check tolerance cm3/1000s. : + 4.0	Tolerance 1/min : +- 15 rack travel mm : 0.50
Spreed Tolerance cm3/1000 strokes : 5.0	Tolerance mm : +- 0.50 Rated speed rpm : 1500
Check tolerance cm3/1000s. : 9.0	LOW IDLE
Rack travel in mm : 5.50 Tolerance mm : +- 0.20	control lever position degree : 73.0
(B) SETTING OF INJECTION PUMP	tolerance degree : +- 6.0 Testing:
WITH GOVERNOR	Rated speed rpm : 325 rack travel mm : 5.50 Tolerance mm : + 0.20
GUIDE SLEEVE POSITION	Rated speed rpm : 275
Rated speed rpm : 1060 Rack travel in mm : 12.80	CRT mm min. :> 7.00
Add travec in hair . 72.00	Rated speed rpm : 400
FULL LOAD DELIVERY AT FULL LOAD STOP +	TORQUE CONTROL
Rated speed rpm : 950 Aneroid pressure hPa : 1200	Rated speed rpm : 950 rack travel mm : 13.85
Del. quantity cm3/1000 strokes : 215.5	Tolerance mm : +- 0.05
Tolerance cm3/1000 strokes : + 1.0 check tolerance	Rated speed rpm : 650 rack travel mm : 13.10 Tolerance mm : +- 0.10
cm3/1000s. : +- 4.0 +- Spreed +- Tolerance cm3/1000 strokes : 5.0 +- 5.0	Rated speed rpm : 750 rack travel mm : 13.70 Tolerance mm : +- 0.20
Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 500 rack travel mm : 12.00
	Tolerance mm : +- 0.20
control lever + position degree : 118.0 +	ANEROID/ALTITUDE COMPENSATOR TEST
tolerance degree : + 6.0 + RATED SPEED	SETTING
rack travel mm : 12.80 + Rated speed rpm : 995 + Tolerance 1/min : + 5	Rated speed rpm : 950 Pressure hPa : 1200 rack travel mm : 13.85 Tolerance mm : +- 0.10

M17

MEASUREMENT

Pressure hPa 950 Rated speed rpm 8.90 rack travel mm : + - 0.20Tolerance mm

950 Rated speed rom

Pressure hPa 535 rack travel mm 12.85 : ← 0.20 Tolerance mm

230 Pressure hPa 10.35 rack travel mm Tolerance mm : + - 0.05

START CUT-OUT

100 Rated speed rpm : > : < Rated speed rpm 260

Check

speed 1/min : > 80 Check

speed 1/min : < 270

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1200 hPa Rated speed rpm 650

Del. quantity cm3/1000 strokes : 222.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

6.0 cm3/1000S.: +-

Spreed

Tolerance

10.0 cm3/1000 strokes :

Check tolerance

14.0 cm3/1000s.

Aneroid pressure

Rated speed rpm 400

Del. quantity

cm3/1000 strokes : 146.0

Tolerance

2.0 cm3/1000 strokes : +-

Check tolerance

cm3/1000s. 4.0

BREAKAWAY

12.80 Rack travel in mm : Rated speed rpm Tolerance 1/min

STARTING FUEL DELIVERY

100 Rated speed rpm 11.20 rack travel mm Tolerance mm : **←** 0.50 Del. quantity

cm3/1000 strokes : Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

: +- 25.0 cm3/1000s.

185.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.07.96 Test oil : ISO 4113

Combination No. : 0 402 798 800

Injection pump

Pump designation : PES8P120A920/4LS7293

EP type number : 0 412 728 807

Governor

Governer design. : RE30

Governer no. : 0 421 890 016

Cust. part No. : 313 GC 5208

Customer—spec. information Customer : MACK Motor : EE9-550 Power KW : 410.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting. Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 3.30
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50Tolerance mm : +0.20

Firing order : 1-2-7-8-4 :-5-6-3

Phasing : 0-45-90-135-180 : -225-270-315

Start of delivery blocking

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR POSITION

M19

	I Francisco arread rise 1. (0
Engine speed min-1: 0	+ Engine speed min-1: 60
Ligite speed with it.	Amplitude V : 1.4 Tolerance V : +/- 0.6
Setting point	+ Check
(P, R and H pump)	tolerance V : +/- 1.20
7 400	forming around six 1, (00
Uact V : 3.100 CRT mm : 13.00	+ Engine speed min-1: 600 + Difference
Tolerance mm : +/- 0.05	+ Amplitude to
Check	+ Amplitude V : max.1.4
tolerance mm : +/- 0.10	+
	+
Check value	(C) INJECTION PUMP WITH POSITIONER
(P, R and H pump)	T (C) INDECTION FORM WITH POSITIONER
	TEST POINT V1
Uact V : 1.700	+
CRT mm : 6.15	+ Rated speed rpm : 950
Tolerance mm : +/- 0.25	1 Uact V : 3.000
Check	<pre>Del. quantity cm3/1000 strokes : 300.5</pre>
tolerance mm : +/- 0.30	Tolerance
	+ cm3/1000 strokes : +- 1.0
Setting point	† Check tolerance
(M pump)	+ cm3/1000s. : +- 4.0
	+ Spreed
Uact V : 3.100 CRT mm : 12.50	+ Tolerance + cm3/1000 strokes : 7.0
CRT mm : 12.50 Tolerance mm : +/- 0.05	+ Check tolerance
Check	+ cm3/1000s. : 11.0
tolerance mm : +/- 0.10	+
	FUEL DELIVERY CHARACTERISTICS
Check value	700
(M pump)	+ Rated speed rpm : 700 + Uact V : 2.990
Uact V : 1.700	Del. quantity
CRT mm : 5.50	+ cm3/1000 strokes : 339.5
Tolerance mm : +/~ 0.25	+ Tolerance
Check	+ cm3/1000 strokes : +- 5.0
tolerance mm : +/- 0.30	+ Check tolerance
Chan marihian	+ cm3/1000S. : + 8.0 + Spreed
Stop position	Tolerance
Uact V : Value with	- cm3/1000 strokes : 12.0
deenergised adjusting magnet	† Check tolerance
and control rod in	- cm3/1000s. : 16.0
stop position.	TEST POINT L1
CRT mm : 0.75 Tolerance mm : +/- 0.25	T POINT LT
Tolerance mm : +/- 0.25 Check	Rated speed rpm : 325
tolerance mm : +/- 0.35	+ Uact V : 1.300
	+ Tolerance Volt : +- 0.060
	+ Check tolerance
ENGINE-SPEED SENSOR	+ Volt : +- 0.070 + Del. quantity
(All P and R pumps not H and M pumps)	+ cm3/1000 strokes : 27.0
п ана п рашрах	Tolerance
Test with control rod	- cm3/1000 strokes : + 3.0
in stop position	Spreed
	+

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 Uact V : 4.700

Del. quantity

cm3/1000 strokes : 180.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance

cm3/1000s. : +- 20.0

Spreed

Tolerance

cm3/1000 strokes : 40.0

Check tolerance

cm3/1000s. : 45.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.07.96 Test oil : ISO 4113

Combination No. : 0 402 798 801

Injection pump

Pump designation : PES8P120A920/4LS7336

EP type number : 0 412 728 810

Governor

Governer design. : RE30

Governer no. : 0 421 890 016

Cust. part No. : 313 GC 5209

Customer—spec. information Customer : MACK Motor : E9-550 Power KW : 410.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 3.30 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 0.20

Firing order : 1-2-7-8-4

: - 5- 6- 3

Phasing : 0-45-90-135-180

: -225-270-315

Start of delivery blocking

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR

POSITION

Faring and the Act O	+ Engine speed min-1: 60
Engine speed min-1: 0	Amplitude V : 1.4 + Tolerance V : +/- 0.6
Setting point	Check
(P, R and H pump)	tolerance V : +/- 1.20
Cry Warman pamps	+
Uact V : 3.100	+ Engine speed min-1: 600
CRT mm : 3.100	+ Difference
Tolerance mm : +/- 0.05	+ Amplitude to
Check	+ Amplitude V : max.1.4
tolerance mm : +/- 0.10	†
Check value	
(P, R and H pump)	(c) INJECTION PUMP WITH POSITIONER
,	+
	+ TEST POINT V1
Uact V : 1.700	† D. 1
CRT mm : 6.15	Rated speed rpm : 900
Tolerance mm : +/- 0.25 Check	+ Uact V : 2.950 + Del. quantity
tolerance mm : +/- 0.30	+ cm3/1000 strokes : 303.0
cocer differ limit	Tolerance
	+ cm3/1000 strokes : + 1.0
Setting point	+ Check tolerance
(M pump)	+ cm3/1000s. : $+$ 4.0
	+ Spreed
Uact V : 3.100	+ Tolerance
Uact V : 3.100 CRT mm : 12.50 Tolerance mm : +/- 0.05	+ cm3/1000 strokes : 7.0
	+ Check tolerance + cm3/1000s. : 11.0
Check tolerance mm : +/- 0.10	+ cm3/1000s. : 11.0
coter arice fini	FUEL DELIVERY CHARACTERISTICS
Check value	+
(M pump)	+ Rated speed rpm : 625
	+ Uact V : 2.880
Uact V : 1.700	+ Del. quantity
CRT mm : 5.50	+ cm3/1000 strokes : 339.5
Tolerance mm : +/- 0.25	+ Tolerance + cm3/1000 strokes : +- 5.0
Check tolerance mm : +/- 0.30	+ Check tolerance
toterance mm : +/- 0.50	+ cm3/1000s. : +- 8.0
Stop position	+ Spreed
	Tolerance
Uact V : Value with	+ cm3/1000 strokes : 12.0
deenergised adjusting magnet	+ Check tolerance
and control rod in	+ cm3/1000s. : 16.0
stop position.	TECT COINT 14
CRT mm : 0.75 Tolerance mm : +/- 0.25	TEST POINT L1
Tolerance mm : +/- 0.25 Check	+ Rated speed rpm : 325
tolerance mm : +/- 0.35	- Vact V : 1.300
1000 mm	+ Tolerance Volt : + 0.060
	+ Check tolerance
ENGINE-SPEED SENSOR	+ Volt : + 0.070
(All P and R pumps not	+ Del. quantity
H and M pumps)	+ cm3/1000 strokes : 27.0
Took with annual and	+ Tolerance + cm3/1000 strokes : +- 3.0
Test with control rod in stop position	+ Cm3/1000 strokes : +- 3.0 + Spreed
in arob bosition	+ Spieed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance cm3/1000s. 12.0

STARTING FUEL DELIVERY

100 Rated speed rpm Uact V 4.700

Del. quantity cm3/1000 strokes : 180.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0

Check tolerance cm3/1000s. : ← 20.0

Spreed

Tolerance

cm3/1000 strokes : 40.0

Check tolerance cm3/1000s. 45.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 23.07.96 : ISO 4113

Combination No. : 0 402 996 304

Injection pump

Pump designation : PES6P120A720RS8510

EP type number : 0 412 926 206

Governor

Governer design. : RE30

Governer no. : 0 421 890 023

Cust, part No. : 313 GC 5205 P3

Customer-spec. information Customer : MACK : E7 450 Motor Power KW : 331.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 084

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : Tolerance mm : + 3.60 : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 12.00 Tolerance mm : +- 0.20

: 1-5-3-6-2-Firing order

: 4

: 0-60-120-180-240 Phasing

: -300

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR POSITION

Engine speed min-1:

Setting point (P, R and H pump)

Uact V : 3.100

M25

CRT mm : 13.00 Tolerance mm : +/- 0.05 Check : +/- 0.10 tolerance mm Check value (P, R and H pump) 1,700 Uact V CRT mm 6.15 : +/- 0.25 Tolerance mm Check : +/- 0.30tolerance mm Setting point (M pump) Uact V 3.100 CRT mm 12.50 : +/- 0.05 Tolerance mm Check : +/- 0.10tolerance mm Check value (amua M) Uact V 1.700 5.50 CRT mm Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30 Stop position : Value with Uact V deenergised adjusting magnet and control rod in stop position. 0.75 CRT mm : +/- 0.25 Tolerance mm Check : +/- 0.35tolerance mm ENGINE-SPEED SENSOR (All P and R pumps not H and M pumps) Test with control rod in stop position Engine speed min-1: 60 Amplitude V 1.4 Tolerance V : +/- 0.6 Check : +/- 1.20 tolerance V Engine speed min-1: 600

Amplitude V : max.1.4 (C) INJECTION PUMP WITH POSITIONER FUEL DELIVERY CHARACTERISTICS Rated speed rpm 625 Uact V 3.210 Del. quantity cm3/1000 strokes : 408.0 Tolerance cm3/1000 strokes : +- 10.0Check tolerance cm3/1000s. : + 12.0Spreed Tolerance cm3/1000 strokes : 16.0 Check tolerance cm3/1000s. 18.0 TEST POINT L1 325 Rated speed rpm : 1.300 Uact V Tolerance Volt : + - 0.060Check tolerance Volt : +- 0.070 Del. quantity cm3/1000 strokes : 30.0 Tolerance cm3/1000 strokes : +-3.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 14.0 STARTING FUEL DELIVERY 100 Rated speed rpm Uact V 4.700 Del. quantity cm3/1000 strokes : 188.0 Tolerance cm3/1000 strokes : +- 19.0 Check tolerance cm3/1000s. 22.0 Spreed Tolerance cm3/1000 strokes : 40.0

Difference

Amplitude to

Check tolerance			
cm3/1000s.	:	50.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23.07.96 : ISO 4113

Combination No. : 0 402 996 305

Injection pump

Pump designation : PES6P120A720RS8512

EP type number

: 0 412 926 207

Governor

Governer design. : RE30

Governer no.

: 0 421 890 024

Cust. part No. : 313 GC 5217 P1

Customer-spec. information Customer : MACK

Motor

: E7

TEST BENCH REQUIREMENTS

Inlet line

: 4.2

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve : 2 413 359 008

Inlet press. bar :

3.0

Tolerance bar : \leftarrow 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

208.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 008

Outside diameter :

6.0

2.0

x length mm :

600

REMARKS

Pump-specific values in Section (B)

must be observed!

(A) INJECTION PUMP SETTINGS

No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Tolerance bar : +- 1.0

4.60 Prestroke mm : +- 0.05

Tolerance mm Check

: +- 0.10tolerance mm

Rack travel in mm : 12.00

Tolerance mm : +- 0.20

: 1-5-3-6-2-Firing order

: 4

: 0-60-120-180-240 Phasing

: -300

(B) POSITIONER TESTING

Warm-up time: 3 minutes at

n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR

POSITION

Engine speed min-1:

0

Setting point

(P, R and H pump)

Uact V

3.100 :

: 13.00 Difference CRT mm Tolerance mm : +/- 0.05 Amplitude to Amplitude V : max.1.4 Check : +/- 0.10 tolerance mm Check value (P, R and H pump) (C) INJECTION PUMP WITH POSITIONER TEST POINT V1 Uact V 1.700 900 Rated speed rpm CRT mm 6.15 : +/- 0.25 3.050 Tolerance mm Uact V Del. quantity Check cm3/1000 strokes : 310.0 : +/- 0.30 tolerance mm Tolerance cm3/1000 strokes : +- 1.0Check tolerance Setting point cm3/1000s.5.0 : +-(M pump) Spreed 3.100 Tolerance Uact V 12.50 8.0 cm3/1000 strokes : CRT mm : +/- 0.05 Check tolerance Tolerance mm cm3/1000s.14.0 Check : +/- 0.10 tolerance mm FUEL DELIVERY CHARACTERISTICS Check value 625 (qmuq M) Rated speed rpm Jact V 3.260 1.700 Del. quantity Uact V cm3/1000 strokes : 392.0 5.50 CRT mm : +/- 0.25 Tolerance Tolerance mm cm3/1000 strokes : \leftarrow 10.0 Check : +/- 0.30Check tolerance tolerance mm cm3/1000s.: + 12.0 Stop position Spreed Tolerance : Value with cm3/1000 strokes : 16.0 Uact V deenergised adjusting magnet Check tolerance and control rod in cm3/1000s.18.0 stop position. TEST POINT L1 CRT mm 0.75 : +/- 0.25 Tolerance mm 325 Check Rated speed rpm : +/- 0.35 1.310 tolerance mm Uact V : +- 0.060 Tolerance Volt theck tolerance : + - 0.070Volt ENGINE-SPEED SENSOR Del. quantity (All Pand R pumps not cm3/1000 strokes : 33.0 H and M pumps) Tolerance 3.0 cm3/1000 strokes : +-Test with control rod Spreed in stop position Tolerance cm3/1000 strokes : 6.0 Engine speed min-1: 60 Check tolerance Amplitude V 1.4 : +/- 0.6 14.0 cm3/1000s.Tolerance V Check : +/- 1.20 tolerance V STARTING FUEL DELIVERY Engine speed min-1: 600

NO1

Rated speed rpm	:	100
Uact V	:	4.700
Del. quantity		
cm3/1000 strokes	:	195.0
Tolerance		
cm3/1000 strokes	: +-	19.0
Check tolerance		
cm3/1000s.	: +-	22.0
Spreed		
Tolerance		
cm3/1000 strokes	:	40.0
Check tolerance		
cm3/1000s.	:	50.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.07.96 Test oil : ISO 4113

Combination No. : 0 403 466 165

Injection pump

Pump designation : PES6MW100/120RS1241

EP type number : 0 413 406 240

Governor

Governer design. : RSV450...1250MWOA383

Governer no. : 0 420 085 266

Cust. part No. : 3929164

Customer—spec. information Customer : CDC Motor : 6 CT Power KW : 133.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. $^{\circ}$ C :

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0
Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

7

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 8.25 Tolerance : + 0.50

Check

tolerance "NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel : 15.00 Difference ° CS : 4.50

BASIC SETTING

Rated speed rpm : 1250 +	Aneroid pressure hPa : 900
Rack travel in mm : 11.05 + Tolerance mm : +- 0.05	Del. quantity cm3/1000 strokes : 123.5 Tolerance
	cm3/1000 strokes : + 1.0
Del. quantity cm3/1000 strokes : 123.5	Check tolerance cm3/1000s. : +- 4.0 Spreed
Tolerance cm3/1000 strokes : + 1.0	Tolerance cm3/1000 strokes : 4.0 Check tolerance
Check tolerance cm3/1000s. : +- 4.0	cm3/1000s. : 7.5
Spreed	
Tolerance cm3/1000 strokes : 4.0	CONTROL LEVER
Check tolerance	control lever position degree : 96.0
cm3/1000s. : 7.5	tolerance degree : +- 4.0
Rated speed rpm : 450	RATED SPEED
Ţ	rack travel mm : 9.90
Rack travel in mm: 5.90	Rated speed rpm : 1325
Tolerance mm : + 0.10	Tolerance 1/min : +- 5
Del. quantity + cm3/1000 strokes : 27.0 +	rack travel mm : 6.70
Tolerance +	Rated speed rpm : 1390
cm3/1000 strokes : + 2.0 +	Tolerance 1/min : +- 5
Check tolerance + 4.5 + 4.5	rack travel mm : 1.00
Spreed	Tolerance mm : + 0.70
Tolerance +	Rated speed rpm : 1510
cm3/1000 strokes : 3.5 +	
Check tolerance	
cm3/1000s. : 5.5	LOW IDLE
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR +	control lever
†	position degree : 76.0
<u> </u>	tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	Setting point w/out bumper spring
Rated speed rpm : 800	Rated speed rpm : 450 rack travel mm : 5.40
Rack travel in mm: 0.50	
Tolerance mm : +- 0.20	Testing:
governor spring	Rated speed rpm : 450
pre-tension +	rack travel mm : 5.90
click setting x : 4.50	Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
+	CRT mm min. : > 19.00
Rated speed rpm : 1250 +	

TORQUE CONTROL

Rated speed rpm : 1250 rack travel mm : 11.05 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 900

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 10.20
Tolerance mm : + 0.20

Rated speed rpm : 500

Pressure hPa : 600 rack travel mm : 10.60 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 114.5
Tolerance
cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : +- 3.0

BREAKAWAY

Rack travel in mm: 9.90
Rated speed rpm: 1325
Tolerance 1/min: +- 5

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50

NO5

Tolerance mm : +- 1.00
Del. quantity
cm3/1000 strokes : 171.5
Tolerance
cm3/1000 strokes : +- 10.0
Check tolerance
cm3/1000s. : +- 13.0

LOW IDLE

Rated speed rpm : 450 Del. quantity cm3/1000 strokes : 27.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s.: +- 4.5 Spreed Tolerance 3.5 cm3/1000 strokes : Check tolerance 5.5 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23.07.96 : ISO 4113

Combination No. : 0 403 466 169

Injection pump

Pump designation : PES6MW100/120RS1242

: 0 413 406 241 EP type number

Governor

Governer design. : RSV500...1100MW5A385

: 0 420 085 270 Governer no.

Cust. part No. : 3926885

Customer-spec. information : CDC Customer : 6 CTA Motor : 179.0 Power KW

TEST BENCH REQUIREMENTS

: 3.2 Inlet line

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 0.1 Tolerance bar

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar : +- 1.5 Tolerance bar

Test Lines : 1 680 750 014

Outside diameter : 6.0

N₀6

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

3.20 Prestroke mm : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 8.50 : +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

: 1 Barrel no.

Beginning of delivery differende

and maximum rack

15.00 travel Difference ° CS : 1.50

BASIC SETTING

Rated speed rpm : 1100 +	Tolerance cm3/1000 strokes : +- 1.0
Rack travel in mm : 13.05 Tolerance mm : + 0.05	Check tolerance cm3/1000s. : +- 4.0 Spreed
Del. quantity cm3/1000 strokes : 162.0	Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5
Tolerance cm3/1000 strokes : + 1.0	RATED SPEED
Check tolerance cm3/1000S. : +- 4.0	rack travel mm : 12.00 Rated speed rpm : 1170
Spreed Tolerance cm3/1000 strokes : 4.0	Tolerance 1/min : + 5 rack travel mm : 1.00
Check tolerance cm3/1000s. : 7.5	Tolerance mm : +- 0.70 Rated speed rpm : 1300
Rated speed rpm : 500	LOW IDLE
Rack travel in mm : 5.20 Tolerance mm : + 0.10	Setting point w/out bumper spring
Del. quantity cm3/1000 strokes : 21.0 + Tolerance +	Rated speed rpm : 500 rack travel mm : 4.70
cm3/1000 strokes : +- 2.0 +- Check tolerance +-	Testing:
cm3/1000s. : + 4.5 Spreed Tolerance	Rated speed rpm : 500 rack travel mm : 5.20 Tolerance mm : +- 0.10
cm3/1000 strokes : 3.5 Check tolerance	
cm3/1000s. : 5.5	TORQUE CONTROL
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1100 rack travel mm : 13.05 Tolerance mm : +- 0.05
‡	Rated speed rpm : 750 rack travel mm : 13.60 Tolerance mm : +- 0.10
GUIDE SLEEVE POSITION	Tolerance mm : +- 0.10
governor spring pre-tension click setting x : 3.25	Rated speed rpm : 1000 rack travel mm : 13.60 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	ANEROID/ALTITUDE COMPENSATOR TEST
Rated speed rpm : 1100 + Aneroid pressure +	
hPa : 1200 + Del. quantity +	SETTING
cm3/1000 strokes : 162.0	Rated speed rpm : 500 Pressure hPa : 1200

MEASUREMENT

Pressure hPa Rated speed rpm 500 rack travel mm 10.70 : +- 0.20Tolerance mm

Rated speed rpm 500

900 Pressure hPa rack travel mm 13.20 : + 0.20Tolerance mm

560 Pressure hPa rack travel mm 11.60 : +- 0.20 Tolerance mm

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1200 hPa Rated speed rpm 750 Del. quantity cm3/1000 strokes : 177.5

Tolerance

cm3/1000 strokes : +-2.0 Check tolerance

cm3/1000s.

5.0 Spreed

Tolerance

6.0 cm3/1000 strokes : Check tolerance

9.0

cm3/1000s.

Aneroid pressure

hPa 500 Rated speed rpm

Del. quantity

cm3/1000 strokes : 119.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s.3.0

BREAKAWAY

Rack travel in mm : 12.00 1170 Rated speed rpm : Tolerance 1/min : +-

STARTING FUEL DELIVERY

Rated speed rpm	:	100
rack travel mm	:	
Tolerance mm	: +	- 1.00
Del. quantity		
cm3/1000 strokes	:	140.0
Tolerance		
cm3/1000 strokes	: +	- 10.0
Check tolerance		
cm3/1000s.	: +	- 13.0

LOW IDLE

Rated speed rpm Del. quantity	:	500	
cm3/1000 strokes	:	21.0	
cm3/1000 strokes	: +-	2.0	
Check tolerance cm3/1000s.	: +-	4.5	
Spreed Tolerance			
cm3/1000 strokes Check tolerance	:	3.5	
cm3/1000s.	:	5.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23.07.96 : ISO 4113

Combination No. : 0 403 466 170

Injection pump

Pump designation : PES6MW100/120RS1242

EP type number : 0 413 406 241

Governor

Governer design. : RSV550...1100MW5A386

Governer no. : 0 420 085 271

Cust. part No. : 3929170

Customer-spec. information Customer : CDC Motor : 6 CTA Power KW : 179.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

N₀9

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 3.20 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 8.50

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

: 1 Barrel no.

Beginning of delivery differende

and maximum rack

15.00 travel Difference ° CS : 1.50

BASIC SETTING

Rated speed rpm : 1100 +	Tolerance cm3/1000 strokes : +- 1.0
Rack travel in mm : 13.05 Tolerance mm : +- 0.05	Check tolerance cm3/1000S. : +- 4.0 Spreed
Del. quantity cm3/1000 strokes : 162.0	Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5
Tolerance cm3/1000 strokes : + 1.0	RATED SPEED
Check tolerance cm3/1000s. : +- 4.0	rack travel mm : 12.00 Rated speed rpm : 1170
Sp. sed Tolerance cm3/1000 strokes : 4.0	Tolerance 1/min : +- 5 rack travel mm : 1.00 Tolerance mm : +- 0.70
Check tolerance cm3/1000s. : 7.5	Rated speed rpm : 1300
Rated speed rpm : 550	LOW IDLE
Rack travel in mm: 5.25 Tolerance mm: + 0.10 Del. quantity	Setting point w/out bumper spring Rated speed rpm : 550
cm3/1000 strokes : 23.0 + Tolerance +	rack travel mm : 4.75
cm3/1000 strokes : +- 2.0 + Check tolerance + cm3/1000S. : +- 4.5 + Spreed	Testing: Rated speed rpm : 550 rack travel mm : 5.25
Tolerance + cm3/1000 strokes : 3.5 + Check tolerance +	Tolerance mm : +- 0.10
cm3/1000s. : 5.5	TORQUE CONTROL Rated speed rpm : 1100
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 13.05 Tolerance mm : +- 0.05
GUIDE SLEEVE POSITION	Rated speed rpm : 750 rack travel mm : 13.60 Tolerance mm : +- 0.10
governor spring pre-tension click setting x : 4.00	Rated speed rpm : 1000 rack travel mm : 13.60 Tolerance mm : + 0.20
FULL LOAD DELIVERY AT FULL LOAD STOP	ANEROID/ALTITUDE COMPENSATOR TEST
Rated speed rpm : 1100 + Aneroid pressure + hPa : 1200 +	SETTING
Del. quantity cm3/1000 strokes : 162.0	Rated speed rpm : 500 Pressure hPa : 1200

MEASUREMENT

Pressure hPa 500 Rated speed rpm 10.70 rack travel mm Tolerance mm : + 0.20

Rated speed rpm 500

900 Pressure hPa 13.20 rack travel mm : +- 0.20 Tolerance mm

560 Pressure hPa 11.60 rack travel mm : +- 0.20 Tolerance mm

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1200 hPa Rated speed rpm 750 Del. quantity cm3/1000 strokes : 177.5 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 5.0 Spreed

Tolerance cm3/1000 strokes : 6.0 Check tolerance 9.0 cm3/1000s.

Aneroid pressure

hPa Rated speed rpm 500 Del. quantity 119.5 cm3/1000 strokes : Tolerance cm3/1000 strokes : +- 1.0

Check tolerance

3.0 cm3/1000s.

BREAKAWAY

12.00 Rack travel in mm: Rated speed rpm Tolerance 1/min

STARTING FUEL DELIVERY

Rated speed rpm	:		700
rack travel mm			20.50
Tolerance mm	:	+-	1.00
Del. quantity			
cm3/1000 strokes	:		140.0
Tolerance			
cm3/1000 strokes	:	+-	10.0
Check tolerance			
cm3/1000S.	:	+-	13.0

LOW IDLE

Rated speed rpm Del. quantity	: 550		
cm3/1000 strokes Tolerance	:	23.0	
cm3/1000 strokes Check tolerance	: +-	2.0	
cm3/1000s. Spreed	: +-	4.5	
Tolerance cm3/1000 strokes	:	3.5	
Check tolerance cm3/1000s.	:	5.5	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 23.07.96 : ISO 4113

Combination No. : 0 403 466 171

Injection pump

Pump designation : PES6MW100/120RS1242

EP type number : 0 413 406 241

Governor

Governer design. : RSV550...1100MW5A387

Governer no.

: 0 420 085 272

Cust. part No. : 3930453

Customer-spec. information Customer : CDC : 6 CTA Motor : 179.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +-

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 : **←** 1.5 Tolerance bar

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : +- 1.0

: 3.20 Prestroke mm : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-5-3-6-2-Firing order

: 4

: 0-60-120-180-240 Phasing

: -300 Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 8.50 : +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

15.00 travel Difference * CS : 1.50

BASIC SETTING

Rated speed rpm : 1100 +	Aneroid pressure hPa : 1200
Rack travel in mm : 13.05 + Tolerance mm : +- 0.05 +	Del. quantity cm3/1000 strokes : 162.0 Tolerance
Del. quantity	cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000 strokes : 162.0 +	cm3/1000s. : +- 4.0 Spreed Tolerance
cm3/1000 strokes : +- 1.0	cm3/1000 strokes : 4.0 Check tolerance
Check tolerance cm3/1000s. : + 4.0	cm3/1000s. : 7.5
Spreed Tolerance	CONTROL LEVER
cm3/1000 strokes : 4.0	control lever
Check tolerance cm3/1000s. : 7.5	position degree : 104.0 tolerance degree : +- 4.0
Rated speed rpm : 550	RATED SPEED
I	rack travel mm : 12.00
Rack travel in mm: 5.25	Rated speed rpm : 1195 _
Tolerance mm : +- 0.10 +	Tolerance 1/min : +- 5
Del. quantity + cm3/1000 strokes : 23.0 +	rack travel mm : 8.00
cm3/1000 strokes : 23.0 +	Rated speed rpm : 1235
cm3/1000 strokes : +- 2.0 +	Tolerance 1/min : +- 5
Check tolerance +	
cm3/1000s. : + 4.5 +	rack travel mm : 1.00
Spreed	Tolerance mm : +- 0.70 Rated speed rpm : 1300
Tolerance + cm3/1000 strokes : 3.5	Rated Speed Ipill . 1500
Check tolerance	
cm3/1000s. : 5.5	
†	LOW IDLE
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	control lever
+	position degree : 79.0
†	tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	Setting point w/out bumper spring
Rated speed rpm : 800	Rated speed rpm : 550 rack travel mm : 4.75
Rack travel in mm: 0.50 + Tolerance mm: +- 0.20 +	Testing:
governor spring	Rated speed rpm : 550
pre-tension +	rack travel mm : 5.25
click setting x : 4.00	Tolerance mm : +- 0.10
	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	
1400	CRT mm min. : > 19.00
Rated speed rpm : 1100 +	

		+ Check tolerance
TORQUE CONTROL		- + cm3/1000s. : 9.0
Rated speed rpm rack travel mm Tolerance mm		<pre>+ Aneroid pressure + hPa : - Rated speed rpm : 500 + Del. quantity - cm3/1000 strokes : 119.5</pre>
Rated speed rpm rack travel mm Tolerance mm	: 750 : 13.60 : + 0.10	Tolerance cm3/1000 strokes : 179.3 cm3/1000 strokes : +- 1.0 check tolerance cm3/1000s. : +- 3.0
rack travel mm Tolerance mm	: 13.60	BREAKAWAY
ANEROID/ALTITUDE COMPENSATOR TEST		Rack travel in mm : 12.00 Rated speed rpm : 1195 Tolerance 1/min : +- 5
SETTING		<u> </u>
Rated speed rpm Pressure hPa	: 500 : 1200	STARTING FUEL DELIVERY
MEASUREMENT		Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 1.00
Pressure hPa Rated speed rpm rack travel mm Tolerance mm		<pre>Del. quantity cm3/1000 strokes : 140.0 Tolerance cm3/1000 strokes : +- 10.0</pre>
Rated speed rpm	: 500	+ Check tolerance + cm3/1000s. : +- 13.0
Pressure hPa rack travel mm Tolerance mm	: 900 : 13.20 : +- 0.20	†
Pressure hPa	: 560 : 11.60	+ LOW IDLE + Rated speed rpm : 550
rack travel mm Tolerance mm	: + 0.20	Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 23.0
		Tolerance - cm3/1000 strokes : +- 2.0
FUEL DELIVERY CHA	ARACTERISTICS	- Check tolerance cm3/1000s. : +- 4.5 Spreed
Aneroid pressure hPa Rated speed rpm	: 1200 : 750	Tolerance - cm3/1000 strokes : 3.5 - Check tolerance
Del. quantity cm3/1000 strokes Tolerance	: 177.5	cm3/1000s. : 5.5
cm3/1000 strokes Check tolerance cm3/1000s.	: + 2.0 : + 5.0	<u> </u>
Spreed Tolerance		End of test specification sheet
cm3/1000 strokes	: 6.0	†

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 23.07.96 : ISO 4113 Test oil

Combination No. : 0 403 466 177

Injection pump

Pump designation : PES6MW100/120RS1242

EP type number : 0 413 406 241

Governor

Governer design. : RSV550...1100MW5A397

Governer no. : 0 420 085 286

Cust. part No. : 3931283

Customer-spec. information Customer : CDC Motor : 6 CTA Power KW : 180.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0
Tolerance bar : +- 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

: 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

N15

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.20 Tolerance mm : +- 0.05 3.20

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 8.50

: +- 0.50 Tolerance Check

tolerance °NW : **←** 0.75

: 1 Barrel no.

Beginning of delivery differende

and maximum rack

15.00 travel : Difference * CS : 1.50

BASIC SETTING

Rated speed rpm : 1100	+ Aneroid pressure + hPa : 1200
Rack travel in mm : 13.05 Tolerance mm : +- 0.05	+ Del. quantity + cm3/1000 strokes : 162.0 + Tolerance
Del. quantity	cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000 strokes : 162.0	cm3/1000s. : +- 4.0 Spreed
Tolerance cm3/1000 strokes : - 1.0	Tolerance cm3/1000 strokes : 4.0 Check tolerance
Check tolerance cm3/1000s. : +- 4.0	cm3/1000s. : 7.5
Spreed Tolerance	CONTROL LEVER
cm3/1000 strokes : 4.0	+
Check tolerance	<pre>control lever position degree : 100.0</pre>
cm3/1000s. : 7.5	tolerance degree : +- 4.0
Rated speed rpm : 550	RATED SPEED
	+ rack travel mm : 12.00
Rack travel in mm : 5.15 Tolerance mm : +- 0.10	+ Rated speed rpm : 1180 + Tolerance 1/min : +- 5
Del. quantity	- Toterance 17mm.
cm3/1000 strokes : 20.0	rack travel mm : 6.00
Tolerance	+ Rated speed rpm : 1235
cm3/1000 strokes : + 2.0 Check tolerance	† Tolerance 1/min : +- 5
cm3/1000s. : +- 4.5	rack travel mm : 1.00
Spreed	+ Tolerance mm : +- 0.70
Tolerance	+ Rated speed rpm : 1300
cm3/1000 strokes : 3.5	†
Check tolerance cm3/1000%. : 5.5	T
	LOW IDLE
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	+ control lever
	<pre>position degree : 77.0 tolerance degree : +- 4.0</pre>
	+ toterance degree 4.0
GUIDE SLEEVE POSITION	Setting point w/out bumper spring
Rated speed rpm : 800	Rated speed rpm : 550 rack travel mm : 4.65
Rack travel in mm : 0.50 Tolerance mm : +- 0.20	+ Testing:
governor spring	+ + Rated speed rpm : 550
pre-tension	+ rack travel mm : 5.15
click setting x : 3.25	Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Detect and a 4400	+ CRT mm min. : > 19.00
Rated speed rpm : 1100	T

N16

TORQUE CONTROL

Rated speed rpm : 1100 rack travel mm : 13.05 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1200

MEASUREMENT

Pressure hPa : Rated speed rpm : 500
rack travel mm : 10.80
Tolerance mm : +- 0.20

Rated speed rpm : 500

Pressure hPa : 900 rack travel mm : 13.00 Tolerance mm : + 0.20

Pressure hPa : 560 rack travel mm : 11.50 Tolerance mm : + 0.20

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 119.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

BREAKAWAY

Rack travel in mm : 12.00
Rated speed rpm : 1180
Tolerance 1/min : + 5

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 20.50
Tolerance mm : + 1.00
Del. quantity
cm3/1000 strokes : 140.0
Tolerance
cm3/1000 strokes : + 10.0
Check tolerance
cm3/1000s. : + 13.0

LOW IDLE

Rated speed rpm : 550
Del. quantity
cm3/1000 strokes : 20.0
Tolerance
cm3/1000 strokes : + 2.0
Check tolerance
cm3/1000s. : + 4.5
Spreed
Tolerance
cm3/1000 strokes : 3.5
Check tolerance
cm3/1000s. : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 24.07.96 Test oil : ISO 4113

Combination No. : 0 401 840 754

Injection pump

Pump designation : PE12P110A920LS3173 EP type number : 0 411 810 708

Governor

Governer design. : RQV300...1150PA820

Governer no. : 0 421 813 561

Cust. part No. : 02421978KY0148-17

Customer-spec. information

Customer : KHD

Motor : BF12L513C Power KW : 386.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1; 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-4-9-8-5-2

: - 11- 10- 3- 6

: - 7- 12

Phasing : 0-15-60-75-120-135

: -180-195-240-255

: -300-315 : +- 0.30

Check

tolerance "NW : +- 0.50

BASIC SETTING

Tolerance

Rated speed rpm : 1150

Rack travel in mm : 12.50

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 157.0

Tolerance

cm3/1000 strokes : +- 1.0

.

Check tolerance	<u> </u>
cm3/1000s. : +- 4.0	CONTROL LEVER
Spreed	
Tolerance	control lever
cm3/1000 strokes : 5.0	position degree : 55.0
	tolerance degree : +- 4.0
Check tolerance	
cm3/1000s. : 8.0	control lever
Rated speed rpm : 300	- position degree : 121.0 - tolerance degree ; +- 4.0
Rated speed rpm : 300	tolerance degree ; +- 4.0
]	- RATED SPEED
Rack travel in mm: 7.00	L
Tolerance mm : + 0.10	rack travel mm : 11.50
Del. quantity	- Rated speed rpm : 1195
cm3/1000 strokes : 17.0	- Tolerance 1/min : + 5
Tolerance	
cm3/1000 strokes : +- 3.0	- rack travel mm : 4.00
Check tolerance	- Rated speed rpm : 1305
cm3/1000s. : +- 5.5	- Tolerance 1/min : +- 15
Spreed	
Tolerance	rack travel mm : 0.50
cm3/1000 strokes : 7.0	Tolerance mm : +- 0.50
Check tolerance	- Rated speed rpm : 1400
cm3/1000s. : 10.0	-
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	- LOW IDLE
+	-
 	- control lever
	- position degree : 85.0
GUIDE SLEEVE POSITION	
+	- position degree : 85.0 - tolerance degree : +- 4.0 -
GUIDE SLEEVE POSITION Rated speed rpm : 1190	- position degree : 85.0 - tolerance degree : +- 4.0 - - control lever
Rated speed rpm : 1190	- position degree : 85.0 - tolerance degree : +- 4.0 - control lever - position degree : 19.0
Rated speed rpm : 1190 Rack travel in mm : 16.50	- position degree : 85.0 - tolerance degree : +- 4.0 - - control lever
Rated speed rpm : 1190 Rack travel in mm : 16.50	- position degree : 85.0 - tolerance degree : +- 4.0 - control lever - position degree : 19.0
Rated speed rpm : 1190 Rack travel in mm : 16.50 Tolerance mm : +- 1.30	position degree : 85.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Testing:
Rated speed rpm : 1190 Rack travel in mm : 16.50	position degree : 85.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300
Rated speed rpm : 1190 Rack travel in mm : 16.50 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP	position degree : 85.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00
Rated speed rpm : 1190 Rack travel in mm : 16.50 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1150	position degree : 85.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300
Rated speed rpm : 1190 Rack travel in mm : 16.50 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1150 Aneroid pressure	position degree : 85.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10
Rated speed rpm : 1190 Rack travel in mm : 16.50 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1150 Aneroid pressure hPa : -	position degree : 85.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00
Rated speed rpm : 1190 Rack travel in mm : 16.50 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1150 Aneroid pressure hPa : - Del. quantity	position degree : 85.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100
Rated speed rpm : 1190 Rack travel in mm : 16.50 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1150 Aneroid pressure hPa : Del. quantity cm3/1000 strokes : 157.0	position degree : 85.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10
Rated speed rpm : 1190 Rack travel in mm : 16.50 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1150 Aneroid pressure hPa : Del. quantity cm3/1000 strokes : 157.0 Tolerance	position degree : 85.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100
Rated speed rpm : 1190 Rack travel in mm : 16.50 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1150 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 157.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	position degree : 85.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 8.60
Rated speed rpm : 1190 Rack travel in mm : 16.50 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1150 Aneroid pressure hPa : Del. quantity cm3/1000 strokes : 157.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0	position degree : 85.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 8.60 Rated speed rpm : 375
Rated speed rpm : 1190 Rack travel in mm : 16.50 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1150 Aneroid pressure hPa : Del. quantity cm3/1000 strokes : 157.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed	position degree : 85.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 8.60
Rated speed rpm : 1190 Rack travel in mm : 16.50 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1150 Aneroid pressure hPa : Del. quantity cm3/1000 strokes : 157.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance	position degree : 85.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 8.60 Rated speed rpm : 375 TORQUE CONTROL
Rated speed rpm : 1190 Rack travel in mm : 16.50 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1150 Aneroid pressure hPa : Del. quantity cm3/1000 strokes : 157.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0	position degree : 85.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 8.60 Rated speed rpm : 375 TORQUE CONTROL
Rack travel in mm: 16.50 Tolerance mm: +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 1150 Aneroid pressure hPa: Del. quantity cm3/1000 strokes: 157.0 Tolerance cm3/1000 strokes: +- 1.0 Check tolerance cm3/1000s: +- 4.0 Spreed Tolerance cm3/1000 strokes: 5.0 Check tolerance	position degree : 85.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 8.60 Rated speed rpm : 375 TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 12.50
Rated speed rpm : 1190 Rack travel in mm : 16.50 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1150 Aneroid pressure hPa : Del. quantity cm3/1000 strokes : 157.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0	position degree : 85.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 8.60 Rated speed rpm : 375 TORQUE CONTROL
Rack travel in mm: 16.50 Tolerance mm: +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 1150 Aneroid pressure hPa: Del. quantity cm3/1000 strokes: 157.0 Tolerance cm3/1000 strokes: +- 1.0 Check tolerance cm3/1000s: +- 4.0 Spreed Tolerance cm3/1000 strokes: 5.0 Check tolerance	position degree : 85.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 8.60 Rated speed rpm : 375 TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 12.50
Rack travel in mm: 16.50 Tolerance mm: +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm: 1150 Aneroid pressure hPa: Del. quantity cm3/1000 strokes: 157.0 Tolerance cm3/1000 strokes: +- 1.0 Check tolerance cm3/1000s: +- 4.0 Spreed Tolerance cm3/1000 strokes: 5.0 Check tolerance	position degree : 85.0 tolerance degree : + 4.0 control lever position degree : 19.0 tolerance degree : + 4.0 Testing: Rated speed rpm : 300 rack travel mm : 7.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 8.60 Rated speed rpm : 375 TORQUE CONTROL Rated speed rpm : 1150 rack travel mm : 12.50

	
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 450 : 750 : 12.50 : ← 0.10
MEASUREMENT	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 450 : 10.70 : + 0.10
Rated speed rpm	: 450
Pressure hPa rack travel mm Tolerance mm	: 365 : 11.15 : + 0.10
Pressure hPa rack travel mm Tolerance mm	: 430 : 12.05 : ← 0.05
START CUT-OUT	
Rated speed rpm Rated speed rpm	: > 100 : < 220
Check speed 1/min Check	: > 80
speed 1/min	: < 240
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa Rated speed rpm	450
Del. quantity cm3/1000 strokes	: 110.0
Tolerance cm3/1000 strokes	: ← 2.0
Check tolerance cm3/1000S.	: +- 5.0
BREAKAWAY	<u> </u>
Rack travel in mm Rated speed rpm	: 11.50 : 1195

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	_IVERY	
Rated speed rpm Del. quantity	:	100
cm3/1000 strokes	:	150.0
Tolerance cm3/1000 strokes	: +-	15.0
Check tolerance cm3/1000s.	: +-	19.0
LOW IDLE	 	
Rated speed rpm	:	300
Del. quantity cm3/1000 strokes	:	17.0
Tolerance cm3/1000 strokes	: +-	3.0
Check tolerance cm3/1000s. Spreed	: +-	5.5
Tolerance m3/1000 strokes	:	7.0
Check tolerance	•	10.0

Tolerance 1/min : +- 5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 24.07.96 Test oil : ISO 4113

Combination No. : 0 401 848 820

Injection pump

Pump designation : PE8P120A720LS3281-1

EP type number : 0 411 828 727

Governor

Governer design. : RQV300...1050PA1009

Governer no. : 0 421 813 938

Cust. part No. : B0148-8-301

Customer-spec. information Customer : KHD

Motor : BF8L513LC

Power KW : 243.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 019

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.75
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm : 13.50 Tolerance mm : +- 0.50

Firing order : 1-8-7-2-6 :-5-4-3

Phasing : 0-45-90-135-180 : -225-270-315

Tolerance : + 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

Tolerance : + 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

n mm · 17 50

Rack travel in mm : 13.50 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 187.0

Tolerance cm3/1000 strokes	: +- 1.0	+ Tolerance mm : +- 0.50
Check tolerance cm3/1000s.	: + 4.0	GUIDE SLEEVE POSITION
Spreed Tolerance		Rated speed rpm : 1160 Rack travel in mm : 12.50
cm3/1000 strokes Check tolerance	: 5.0	Tolerance mm : +- 1.30
cm3/1000s.	: 9.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm		Rated speed rpm : 1050 Aneroid pressure hPa : 850
Rack travel in mu Tolerance mm		Del. quantity cm3/1000 strokes : 187.0
Del. quantity cm3/1000 strokes Tolerance	: 33.0	<pre>+ Tolerance + cm3/1000 strokes : +- 1.0 + Check tolerance</pre>
cm3/1000 strokes Check tolerance	: +- 3.0	cm3/1000s. : +- 4.0 Spreed
cm3/1000S. Spreed Tolerance	: +- 6.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance
cm3/1000 strokes Check tolerance	: 8.0	cm3/1000s. : 9.0
cm3/1000s.	: 12.0	+
(B) SETTING OF IN		+ CONTROL LEVER + control lever + position degree : 123.0 + tolerance degree : +- 4.0
GUIDE SLEEVE TRAN		RATED SPEED
Rated speed rpm guide sleeve travel mm Tolerance mm		rack travel mm : 12.50 Rated speed rpm : 1095 Tolerance 1/min : +- 5
Rated speed rpm guide sleeve	: 1108	rack travel mm : 4.00 Rated speed rpm : 1210
travel mm Tolerance mm	: 8.59 : +- 0.15	Tolerance 1/min : +- 15 rack travel mm : 0.50
Rated speed rpm guide sleeve		Tolerance mm : + 0.50 Rated speed rpm : 1350
travel mm Tolerance mm	: 5.37 : + 0.25	<u> </u>
Rated speed rpm guide sleeve		LOW IDLE
travel mm Tolerance mm	: 3.00 : ← 0.25	control lever position degree : 95.0
Rated speed rpm guide sleeve		tolerance degree : +- 4.0
travel mm	: 11.50	+ Testing:

		4
Rated speed rpm	: 300	Check
rack travel mm		+ speed 1/min : > 80
Tolerance mm		Check
TOCCT GITCC TIME		speed 1/min : < 240
Rated speed rpm	: 100	+
CRT mm min.	: > 7.90	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm	: 400	Aneroid pressure
Raced Speed 1 pm	. 400	+ hPa : 850
		- Rated speed rpm : 650
TORQUE CONTROL		Del. quantity
1011402 001111102		- cm3/1000 strokes : 188.0
Rated speed rpm	: 1050	+ Tolerance
rack travel mm		- cm3/1000 strokes : + 2.0
Tolerance mm	: +- 0.05	Check tolerance
TOTOTALICE IIII	0.05	+ cm3/1000s. : +- 5.0
Rated speed rpm	: 650	
rack travel mm		Aneroid pressure
Tolerance mm		+ hPa : -
		Rated speed rpm : 500
Rated speed rpm	. 775	+ Del. quantity
rack travel mm	13.70	+ cm3/1000 strokes : 125.0
Tolerance mm	: +- 0.10	+ Tolerance
1010141100		+ cm3/1000 strokes : +- 1.0
		- + Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST		- cm3/1000s. : +- 4.0
		
		+ BREAKAWAY
SETTING		+
		+
Rated speed rpm		+ Rack travel in mm : 12.50
Pressure hPa	: 850	+ Rated speed rpm : 1095
rack travel mm		+ Tolerance 1/min : + 5
Tolerance mm	: +- 0.05	†
MEASUREMENT		OTADTANG FUEL DELTWEDY
Outros Long		+ STARTING FUEL DELIVERY
Pressure hPa		Rated speed rpm : 100
Rated speed rpm	: 500	
rack travel mm	: 12.00 : +- 0.10	+ Del. quantity + cm3/1000 strokes : 185.0
Tolerance mm	: +- 0.10	+ Tolerance
Ontrod around ann	. 500	+ cm3/1000 strokes : +- 10.0
Rated speed rpm	: 500	+ Check tolerance
D	. 275	+ cm3/1000s. : +- 14.0
Pressure hPa	: 275 : 12.50	† CM3/10005. : += 14.0
rack travel mm		Ť
Tolerance mm	: - 0.20	Ī
Pressure hPa	: 595	I
rack travel mm	: 13.40	LOW IDLE
Tolerance mm	: +- 0.05	T COM INCL
roterance mm	. + 0.05	Rated speed rpm : 300
		- + Del. quantity
CTART CUT_OUT		
START CUT-OUT		+ Tolerance
Dotod amakal mar	. \ 100	- cm3/1000 strokes : +- 3.0
Rated speed rpm		T CMS/TODU Strokes : ** 3.0
Rated speed rpm	: < 220	†

: +-	6.0
:	8.0
:	12.0
	: +- :

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 22.07.96 Edition : ISO 4113 Test oil

Combination No. : 0 401 876 814

Injection pump

Pump designation : PE6P110A320RS3364 EP type number : 0 411 816 798

Governor

Governer design. : RSV300...900P1A625 Governer no. : 0 421 833 554

Cust. part No. : 11030180

: -P02 v.01/96

Customer-spec. information

Customer : VME

: TD 63 KFE Motor Power KW : 120.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

: 40 temp. °C Tolerance *C

Overflow valve : 2 417 413 046

inlet press. bar : 1.5
Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.45 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: +- 0.30 Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 12.20 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 151.0

N25

	+		
Tolerance cm3/1000 strokes	: +- 1.0	RATED SPEED	
Check tolerance cm3/1000s.	: +- 3.0	rack travel mm Rated speed rpm Tolerance 1/min	: 930
Spreed Tolerance cm3/1000 strokes	: 4.0	rack travel mm Tolerance mm Rated speed rpm	: 0.85 : +- 0.55 : 1150
Check tolerance cm3/1000s.	: 7.5		
Rated speed rpm	: 300	LOW IDLE	
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: +- 0.10	Setting point w/o Rated speed rpm rack travel mm	: 300
Tolerance cm3/1000 strokes	1	Testing:	
Check tolerance cm3/1000S. Spreed Tolerance	‡	Rated speed rpm rack travel mm Tolerance mm	
cm3/1000 strokes Check tolerance	t	TORQUE CONTROL	······
cm3/1000s. (B) SETTING OF IN WITH GOVERNOR	‡	Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE	: 900 : 12.20 : ← 0.05
GUIDE SLEEVE POSI	TION	COMPENSATOR TEST	
governor spring pre-tension		SETTING	
click setting x	Y AT TUIL LOAD STOP	Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 550 : 1500 : 12.20 : +- 0.05
Rated speed rpm	: 900	MEASUREMENT	
Aneroid pressure hPa Del. quantity cm3/1000 strokes Tolerance	+	Pressure hPa Rated speed rpm rack travel mm Toleranse mm	: - : 550 : 9.00 : +- 0.10
cm3/1000 strokes Check tolerance cm3/1000s.	: +- 1.0 : +- 3.0	Rated speed rpm	: 550
Spreed Tolerance cm3/1000 strokes	‡	Pressure hPa rack travel mm Tolerance mm	: 650 : 2.90 : +- 0.20
Check tolerance cm3/1000s.	: 7.5	Pressure hPa	: 90

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: 0.25 rack travel mm : +- 0.05 Tolerance mm

End of test specification sheet

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 550 Rated speed rpm

Del. quantity cm3/1000 strokes : 87.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. 4.0

BREAKAWAY

Rack travel in mm : 11.20 Rated speed rpm : Tolerance 1/min

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes : 103.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s.: +- 14.0

LOW IDLE

300 Rated speed rpm

Del. quantity cm3/1000 strokes : 26.0

Tolerance

2.0 cm3/1000 strokes : +-

Check tolerance cm3/1000s. 4.5

Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance cm3/1000s. 6.0